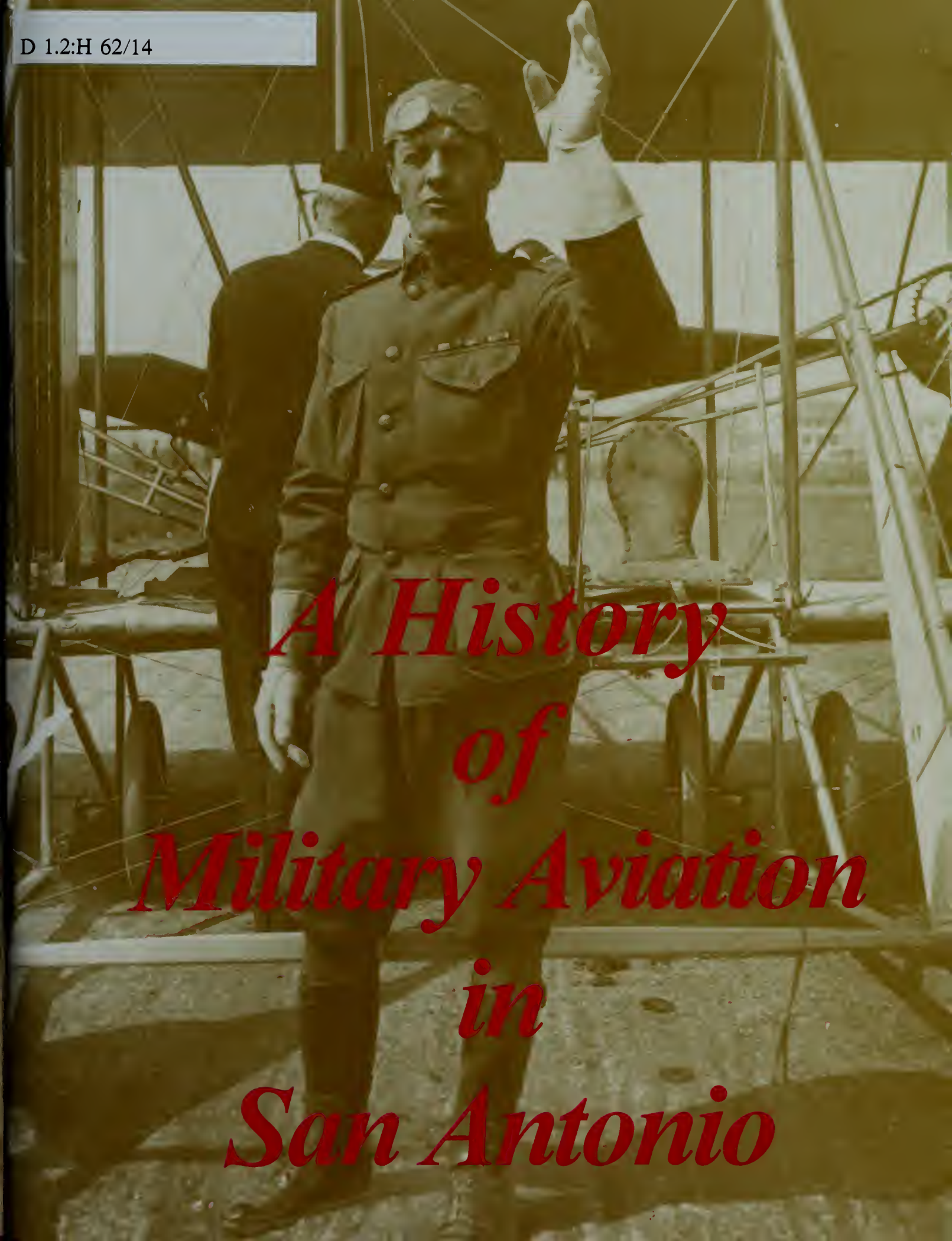
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A History of Military Aviation in San Antonio

Pictured on the cover is Lieutenant Benjamin D. Foulois, one of the nation's earliest pilots and an aviation pioneer. The photograph was provided by Mr John Manguso, Director of the Fort Sam Houston Museum.

Preface

San Antonio, Texas, is the home of a handful of military installations whose names are legendary in the annals of military aviation--Fort Sam Houston, Kelly Field, Brooks Field, Randolph Field, and the Johnny-come-lately of the group, the San Antonio Aviation Cadet Center, now known as Lackland Air Force Base.

The Alamo City's ties to military aviation go back to 1910 when Lieutenant Benjamin Foulois arrived at Fort Sam Houston with the Wright Flyer, the Army's only airplane, packed in crates. There, he literally taught himself how to fly and shared his new-found knowledge with a small band of adventurous Army officers. Like most youngsters, military aviation underwent some growing pains before becoming firmly established in San Antonio.

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That happened with the founding of Kelly Field, where the first aircraft landed on April 5, 1917, making Kelly the oldest, continuously active military airfield in the United States Air Force. Within a matter of months, the new airfield was providing training for hundreds of flying cadets (the more familiar term "aviation cadet" did not come into use until 1941).

In the summer of 1917, as Kelly Field was flooded with recruits, Army aviators surveyed a field south of San Antonio as a potential site for another airfield, Brooks Field, which opened in 1918. Brooks trained those who had already earned their wings to be instructor pilots. A few months after the armistice, the school at Brooks closed its doors, only to reopen them in 1922.

For the next five years, all Army pilots received their wings in San Antonio, going through primary training at Brooks Field and advanced training at Kelly Field. Landmark legislation in 1926 led to the construction of another major flying training installation in the San Antonio area--Randolph Field. Dedicated in 1930, Randolph took over primary training from Brooks and March Fields. With the opening of the flying school at Randolph, San Antonio once again became the home of all Air Corps pilot training.

In 1942 the War Department separated a portion of Kelly Field from the main base and made it an independent installation--the San Antonio Aviation Cadet Center. For most of World War II, the center served as a preflight school and classification center, and when it was over the mission shifted to basic military training--a mission forever linked with Lackland Air Force Base.

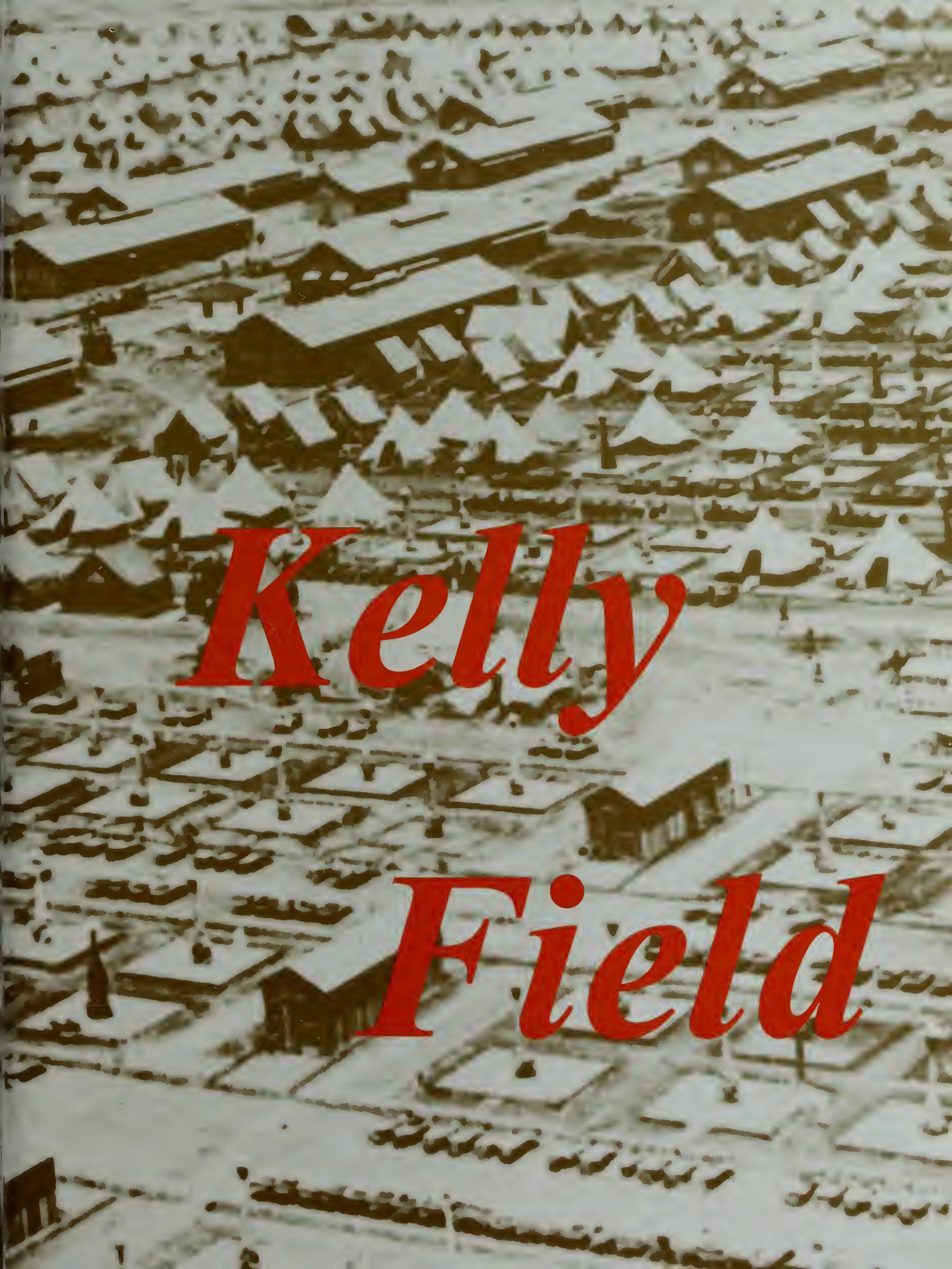
Since World War II, Kelly, Brooks, Randolph, and Lackland have all remained important contributors to the Air Force's mission. Each base, however, adapted its mission in response to the ever-changing challenges of the post-World War II era. These years, marked first by the onset of the Cold War, moved inexorably through regional conflicts in Korea, Southeast Asia, and the Persian Gulf, and culminated in the disintegration of the Soviet empire. The end of the Cold War most severely impacted Kelly, among San Antonio's bases, when it was announced the air logistics center would close and the base would realign with adjoining Lackland Air Force Base in 2001. At the same time, the other bases also had to adapt to the changing world order.

This history was a collaborative effort by Air Force historians in the San Antonio area. The narrative and photos were drawn from official histories and other published works. Ms Ann Hussey and Dr Robert Browning from the San Antonio Air Logistics Center history office wrote the sections dealing with Fort Sam Houston and Kelly. Dr Ed Alcott, historian for the Human Systems Center, was the principal author of the section on Brooks. Mr Edgar Sneed wrote most of the material on the San Antonio Aviation Cadet Center and Lackland. Mr Thomas Manning, Ms Pat Parrish, and Mr Dick Emmons from the Air Education and Training Command history office were the principal authors of the history of Randolph. Ms Parrish brought together the varied pieces of the puzzle in laying out the publication. Also assisting in the overall effort were Mr Dick Burkard, Mr Bruce Ashcroft, Mrs Edith Taylor, and Ms Kathlyn Cosgrove from the AETC history office.

Thomas A, Manning
Command Historian

Revised September 2000




Kelly
Field

The Early Days, 1910-1916

Military aviation came to the Alamo City for the first time in February 1910 when Lieutenant Benjamin D. Foulois arrived at Fort Sam Houston, Texas, with a party of enlisted men and the Army's only airplane. Foulois was there partly because the Army did not know where else to send him or its lone airplane. Although just over six years had passed since the Wright brothers' first powered flight of December 1903, the Army was not a complete convert to the idea that flying had military utility. Army officials at first dismissed offers from the Wrights. If President Theodore Roosevelt had not intervened and ordered Secretary of War William H. Taft to investigate the invention, the Wrights might have sold the airplane to a European power. Reluctantly, the War Department did call for bids for an aircraft that could carry two people at an average speed of 40 miles per hour over a distance of 125 miles. Three potential builders responded, but only the Wrights had the technical skill to actually deliver a machine. Army officials balked at the estimated cost of $25,000 but finally found the money, and in August 1908, flight tests began at Fort Myer, Virginia.



The experiences of Captain Foulois and members of the 1st Aero Squadron with the Punitive Expedition in Mexico in 1916 persuaded officials in the Aviation Section to open two new training fields in the San Antonio area.

Along with demonstrating that their plane met the Army's specifications, the Wrights also agreed to train a handful of officers to fly it. Spectators crowded the fields to gawk and applaud, but tragedy struck on September 17, 1908, when the plane crashed, severely injuring Orville Wright and killing his passenger, Lieutenant Thomas Selfridge. The brothers did not return to Fort Myer until June 1909. On July 27 Orville Wright, now recovered from his injuries, took Lieutenant Frank P. Lahm as a passenger on the first official test flight. Three days later, with Lieutenant Foulois as a passenger, Orville Wright flew five miles to Alexandria, Virginia, at an average speed of 42.5 miles per hour. On August 2 the Army accepted the plane--Aeroplane Number 1.

Wilbur Wright completed the contract during the fall of 1909 by teaching Lieutenants Frank Lahm and Frederic C. Humphreys to fly. Foulois flew at times as a passenger, but he had not yet soloed when Lahm and Humphreys crashed the plane in November. While workmen conducted repairs, the Army debated what to do with it. Finally, with winter weather severely curtailing any flying around Washington, Foulois got instructions to take the plane and a group of eight enlisted men to San Antonio, Texas, but first they put the plane on display at the annual Chicago Electrical Trade Exhibition.

When Foulois arrived at Fort Sam Houston, the first order of business was construction of a small hangar near the mounted drill field which would serve as a landing field. This task finished, on March 2, 1910, Foulois climbed onto the small seat for his first solo flight, indeed his first take-off as anything other than a passenger. Foulois later recalled the instructions that sent him to San Antonio as "take plenty of spare parts and teach yourself to fly," and this he now did, somehow getting the plane off the ground and flying lazily around the parade ground until a cracked fuel pipe forced an abrupt emergency landing. As Foulois put it, this late winter day in the San Antonio sky was not just the first military flight over the city, it was "my first solo, landing, take-off, and crash." Undaunted, over the next several months he did just what Chief Signal Officer Brigadier General James Allen told him to do: he taught himself to fly, carrying on a regular correspondence with the Wright brothers (who coached him long distance on proper procedures). "I was," he later remarked, "the first, and only pilot to learn to fly by mail."

Flying at Fort Sam Houston

During the rest of 1910 and into early 1911, Foulois and his small band of enlisted mechanics modified the Wright plane. For takeoff, the Ohio brothers used a catapult system in which a counterweight dropped from a small tower pulled the aircraft along a track, helping the engine propel the plane aloft. The pilot landed on skids. However, Foulois and his men installed a wheeled undercarriage, ending reliance on the track and tower system. As members of the Signal Corps, they also spent time putting in an electronic buzzer system at the Army's target range at Leon Springs, Texas, northwest of San Antonio.

Foulois also happily experimented with a Wright Model B Flyer loaned to the Army by millionaire publisher Robert Collier. Together with civilian pilot Philip Parmalee, a Wright employee, Foulois participated in training flights along the Rio Grande, exploring methods of cooperation with maneuvering troops on the ground. The intrinsically risky nature of flying during this early period was demonstrated on a flight in Texas from Eagle Pass to Laredo when Parmalee accidentally shut off the fuel flow to the engine. Foulois glided the plane to a rough crash landing in the shallow water of the river. Fortunately, both men were unhurt, but the Collier airplane suffered the ignominy of returning to Fort Sam Houston by wagon rather than under its own power.

Also at this time, pioneer aircraft builder Glenn Curtiss had a flying school in operation on North Island, California, just outside San Diego. He invited military officers to take flying lessons free of charge. The Army promptly took him up on the offer and ordered three junior lieutenants, Paul W. Beck, John C. Walker, and George E.M. Kelly, to attend the school. Back in Washington, a reluctant Congress was impressed enough by these early efforts to appropriate $125,000 for Army aeronautics. Chief Signal Officer General James Allen used this money to order five new airplanes in March 1911.



Foulois (second from right) and his crew pose with Airplane Number 1 while at Fort Sam Houston in 1910.

In April 1911, the three officers at North Island received orders to report to Fort Sam Houston. Their arrival prompted the local signal officer, Major George Squier, to set up a provisional aero company. This ad hoc organization was to train additional local officers as pilots and continue experiments in air-ground cooperation to explore the usefulness of the airplane as a military tool. Foulois took on the task of developing the first set of provisional regulations for the operation of Army aircraft, along with the first set of flying safety rules. At almost the same time, the first of the new airplanes, a Curtiss Type IV military pusher, arrived in San Antonio.



Among students at the Glenn Curtiss school at North Island in 1911 was Lieutenant George E.M. Kelly (far left).

Although the Wright brothers would end up suing Curtiss for patent infringement, triggering a long running legal feud, there were several important differences between their machine and the plane built by the Californian. Instead of wing-warping to provide stability and allow turns, the Curtiss machine used ailerons linked to the pilot by a shoulder harness arrangement. A wheel on a center post controlled elevators and the rudder. Moreover, unlike the two-place Wright machine, the Curtiss was a single-seater. A pilot trained on the Wright model had to learn an entirely new system to fly the Curtiss, and he had to do it on his own. Eager to show what they could do, and claiming some familiarity with the Curtiss system, the three new arrivals promptly began flying the new plane at Fort Sam Houston. As an observer, Foulois found their enthusiastic aerial efforts frightening. "They did many of the things I had learned not to do," he recalled, "and practiced their mistakes time and time again." At one point Lieutenant Walker almost crashed, stalling a few feet off the ground during an ill-advised turn at low speed. He banged the front fork of the Curtiss tricycle landing gear hard into the ground, thoroughly scaring himself. Shortly thereafter, Walker asked to be relieved from flying. Lieutenant Beck fared little better. Flying too low and far too slow, he stalled during a landing attempt, smashed the aircraft into the ground, and knocked himself out. When he regained consciousness, Beck found himself wandering aimlessly in the mesquite shrub with the control wheel in his hands.

Tragedy Strikes

Foulois observed the repair work keenly, and later said he was not happy with what he saw. In particular,



Lieutenant Kelly is flying this Curtiss pusher. He was at the controls of a similar aircraft at the time of his fatal crash.

the new front fork for the landing gear, in his opinion, was poor quality and had an unnecessary hole drilled through it. On May 10, 1911, the repaired plane was ready, although no test flight had confirmed the integrity of the repairs. Into the seat climbed Lieutenant Kelly, the least experienced of the three young officers and very eager to try his luck with the Curtiss machine.

George Edward Maurice Kelly was born in London, England, on December 14, 1878. Educated at several schools, he emigrated to the United States in 1896 at the age of 17 and joined two uncles already in business in Great Falls, Montana. At the outbreak of the Boer War, he attempted to enlist in the Canadian Mounted Rifles, but they rejected him, purportedly due to light weight. In 1902 Kelly became a naturalized American citizen, but he still desired a military career. Learning that commissions in the US Army could be obtained by enlisted men, he signed up with the coast artillery in January 1904, exactly a month after his 25th birthday. After serving the mandatory two years, he applied for a commission in December 1905 and took the preliminary examination the following March. By the time he took the final examination in January 1907, Kelly was a sergeant. On February 28, 1907, he accepted an appointment as a second lieutenant in the 30th Infantry Regiment and by mid-summer was serving with that regiment in the Philippines.

As was common in the Army during the early 1900s, Kelly took a leisurely leave on his return, traveling through China, Egypt, and Europe before rejoining his regiment in December 1909. While on duty near San Francisco, he had the chance to make a balloon ascent. Bitten by the flying bug, he won approval from the War Department to go to San Diego in February 1911 for flight training under Glenn Curtiss. He had flown for less than four months when he clambered aboard the Model IV pusher sitting near the Fort Sam Houston parade ground, fired up the four-cylinder engine, and steered the flimsy, wood, cloth, and wire biplane into the air.

A number of individuals, including Foulois, Frank Coffyn of the Wright Company (serving as a flight instructor), and Lieutenants Horace Hickam and Leighton Hazelhurst, observed Kelly's flight. As they watched, Kelly spent about five minutes circling the parade ground and then came in to land. He was going far too fast, and his angle of descent was, they noted, too steep. The wheels of the Curtiss plane hit hard, bouncing Kelly back up. He circled and tried again. Reports differ on this second approach, but Kelly apparently got the glide angle right and reduced power. Some observers, however, claimed that the aircraft controls did not seem to operate as they should have. In any case, once again, the touchdown was hard, bouncing the plane up several feet. Engine roaring, Kelly's plane headed toward the tents of the 11th Infantry. Whether it was done deliberately, as some accounts suggest, or was simply the result of a lack of control, the aircraft now banked to the left, and a wing tip caught the ground. The plane turned a cartwheel, pitched the young lieutenant a considerable distance over the front elevator, and then disintegrated into a mass of torn fabric and shattered wood, with bracing wire tangled in the whirling propellor. Rescuers ran to where Kelly lay unconscious. He had fractured his skull. Rushed to a local hospital, he died two hours later.

George Kelly was the first American military aviator to die in the crash of a military airplane, and his death cast a pall over the small group of flyers. In later years, Foulois claimed that the fault was Beck's for failing to test the repairs made to the Curtiss the day before. This, coupled with Kelly's lack of experience, was the real cause of the crash, not the loss of elevator control together with an error in judgment over the selection of a proper landing location finally cited unanimously by the board of officers that investigated the accident. "My prejudiced viewpoint was not introduced into the investigation," Foulois stated, since Major Squier "did not put me on the board and I was not called as a witness." However, the records show quite clearly that Foulois was indeed on the board, along with Beck and Walker, and in fact was the senior flying officer to pass official judgment, casting doubt on some of the assertions he made over 50 years later.

There is, however, no debate on the outcome of Kelly's fatal crash. Already annoyed by the intrusion of the noisy, dangerous machines on his parade ground, General William H. Carter, Commander of the Maneuver Division at Fort Sam Houston, now demanded that the airmen take themselves and their contraptions to some other site, forbidding all flying at the fort.

Forced to find a new home, the handful of pilots and men first went back to College Park, Maryland, where the Signal Corps decided to locate a flying school (the same place Lahm and Humphreys learned to fly.) Although convenient to the War Department, allowing officers to perform double duty by flying at the school and handling staff chores in the Signal Corps section, bad weather made College Park unsuitable in winter. So, in the fall of 1911, the flyers relocated once more, this time to Augusta, Georgia, where they stayed until spring when they migrated back north to College Park.



For a brief period in 1915-1916, the Remount Depot at Fort Sam Houston was the home of the 1st Aero Squadron. The depot later became Dodd Field.

Five officers and seven aircraft made up the entire contingent of the Aeronautical Section when it returned to Augusta in late 1912. Amid relatively routine cross-country flying, however, abruptly orders arrived in February 1913 for the flyers to report to Texas City, Texas, immediately. Ironically, General Carter, who found aircraft dangerous and useless in 1911, now needed them to augment his Second Infantry Division, engaged in guarding the border with Mexico against raids spawned by the ebb and flow of fighting in that country's on-going revolution.

Within a few weeks, it was evident that no major operations would take place along the border. However, instead of returning to Augusta, the airmen now found themselves ordered to North Island. There, the Signal Corps established a small training school. In April of 1914, the sudden eruption of the crisis that would lead to American occupation of Veracruz, Mexico, brought five pilots and three planes to Galveston, Texas, too late to join the expedition. In June Congress shored up the unsteady organizational foundation by establishing the Aviation Section of the Signal Corps on a permanent basis. Three months later Foulois took command of the 1st Aero Squadron at North Island.

In 1915 as European aviators began the difficult process of transforming fragile wood and fabric machines into deadly weapons of modern warfare, American eyes fixed once more on the rising possibility of trouble along the border with Mexico. A detachment of the 1st Aero Squadron began operating out of Brownsville and Mission in the Rio Grande valley in April. In July Foulois took the remainder of his squadron to Fort Sill, Oklahoma, partly to practice coordinating observation with artillery and partly to bring them closer to the likely scene of action.

Back to San Antonio

Fort Sill was only an intermediate stop. The final destination of the 1st Aero Squadron was a place familiar to many of its members and especially its captain--San Antonio. In November 1915, the 1st Aero Squadron tackled its longest overland flight, traveling in stages to take up residence at the former Remount Depot at Fort Sam Houston. Military flying was back in the Alamo City.

Flying Training at Kelly, 1917-1943

On November 4, 1916, Benjamin Foulois, now a major, stepped off the train at the San Antonio station. His orders, given verbally by the new head of the Aviation Section of the Signal Corps, Colonel George Squier, were to find a suitable site for the construction of a new flying field. Foulois was not, he later said, instructed to necessarily locate that field near San Antonio. He simply could not conceive of locating it anyplace else.

1st Aero Squadron

Foulois was certainly no stranger to the area. His early efforts to learn to fly in "Old Number 1" were widely reported in the local papers. More recently, in the fall of 1915, his 1st Aero Squadron made the fort's Remount Depot its home. When on March 9, 1916, the Mexican revolutionary Pancho Villa raided Columbus, New Mexico, President Woodrow Wilson responded by ordering a "Punitive Expedition" under Brigadier General John J. Pershing to go into Mexico and either hunt down Villa or break up his band to prevent any further border raids. Included in the 10,000 men Pershing took with him into Mexico was the 1st Aero Squadron, which left San Antonio almost at once to take up temporary quarters at Columbus and later at various locations in Mexico.

This was the first field test of American military aviation, and it was not a success. Hampered by underpowered engines in the thin air over the mountains of northern Mexico, only two of the original JN-2 aircraft remained operational after a month, and both of these were condemned and destroyed as unserviceable upon their return to Columbus. With European powers putting ever greater numbers of vastly superior aircraft into the skies over the trenches, it was clear to American aviators that something must be done quickly to improve and expand American military air strength. In August 1916, Congress appropriated the unheard of sum of $13 million for military aeronautics, and Colonel Squier focused the efforts of his small staff on the formation of five additional squadrons; the acquisition of more powerful aircraft; and the creation of new, larger training facilities. Foulois, the most experienced flying officer in the Army, was the obvious choice to survey potential sites and choose one to be the locus of American military aviation.

Opening the New Field

He wasted no time. Arguing that the former Remount Depot site at Fort Sam Houston was too small to handle aircraft with more powerful engines, he ranged over the local area and found a potentially suitable site within nine days. The site he fixed on was a triangular tract of approximately 700 acres, adjacent to the tracks of the Missouri-Pacific Railroad on its east side, bounded by Leon Creek to the west and south, and by the Frio City road on the north. The site had the advantage of being flat with good road and rail access. It also had an artesian well for water, an important consideration.

On November 21, returning through San Antonio after an inspection tour of posts in the Southern Department, Brigadier General George Scriven, the Army's Chief Signal Officer, visited this site with Foulois. Scriven verbally authorized Foulois to proceed with obtaining lease agreements from the local landowners. Almost immediately, Foulois hit a snag. He had no difficulty obtaining the agreements, but the aviation appropriation did not include specific provision for using the money to acquire land, aside from an experimental station which would become Langley Field, Virginia. With Texas Senator Morris Sheppard spearheading the effort to correct this oversight, Congress revised the original bill in late December, and in January 1917, the War Department authorized payment for a one-year lease. At the same time, the new 3d Aero Squadron rapidly took shape at Fort Sam Houston.

The men of the 3d Aero Squadron joined local civilian crews in clearing and smoothing the land. By March 1917, permanent parties remained on the site to guard the growing stockpiles of equipment and material. A local builder, Ernest Koerner, won a contract to erect the first concrete and steel hangars, and construction began on March 27. These hangars were actually modified railroad siding buildings, similar to a pair of hangars at Fort Sam Houston's Remount Depot. They were still no more than concrete

Stinson Field

Among the first four flyers to land at the newly cleared field in April 1917 was a young San Antonian named Eddie Stinson. The Stinsons were already famous for their pioneering efforts in aviation, and Eddie himself was, for all his skill, actually less well known than his sisters, Katherine and Marjorie.

Katherine was 21 when she first soloed in July 1912, becoming the fourth American woman to gain a pilot's license from the *Federation Aeronautique Internationale* (FAI). The following April she and her mother formed the Stinson Aviation Company, and Katherine began touring with her Wright B Flyer. In 1913 the family moved to San Antonio, and somehow Katherine got permission to use Foulois' former sheds at Fort Sam Houston to store her plane. She also got permission to use the parade ground as a landing field. A year later her 19-year-old sister, Majorie, became the ninth woman to earn an FAI certificate.

The flying sisters earned money touring and teaching. In May 1915, Katherine also became the first woman to fly the mail in Texas. During this time, their mechanic was their brother, Eddie. Despite his eagerness to fly with them, neither would teach him; perhaps because he had a reputation for drinking. But during 1915, Eddie scraped up enough money to pay for lessons at the Wright School in Dayton, Ohio.

He joined his sisters in San Antonio in the fall, just about the time the 1st Aero Squadron arrived from Fort Sill, Oklahoma. Evicted from Fort Sam Houston, the family leased a 750-acre tract south of the city and built their own field.

With World War I underway, the Stinsons began training Canadian pilots at their field. During 1916, Katherine toured western Canada, Japan, and China, while Marjorie handled the instruction. Eddie helped teach acrobatics to pilots of the 1st Aero Squadron. Allegedly, it was during this period that he discovered, apparently by accident, the secret of escaping from a spin. Impressed, Benny Foulois was said to have demanded that Eddie teach the technique to all his pilots. When Kelly Field opened in April 1917, Eddie Stinson was a natural choice to lead the three Army pilots to the new field.

Diagnosed as tubercular by an Army doctor, Eddie could not get a commission. Near the end of 1917, while serving as a civilian instructor at Kelly, his frustration triggered a monumental bender. Eddie awoke to find himself a private in the Army. Hustled back to Kelly by irate officers, he was soon back at work as an instructor. When Army officials denied his request to go overseas, Stinson disappeared for a week to drink away his disappointment. His instructor's skills were desperately needed, but the Army did not want to have a soldier who periodically went AWOL [absent without leave], nor were senior officers happy at having a private instruct officers, especially a private with Eddie's wild reputation. So, he was quietly discharged and hired again as a civilian. For all his bad habits, Stinson was a superlative flyer. His aerial demonstrations left other pilots awed. For the rest of the war, he remained at Kelly as a civilian instructor.

Katherine Stinson stopped flying in 1918. Exhausted by her touring schedule, she contracted tuberculosis. It took her six years to recover from the illness. Even so, she never flew again as a pilot. In 1928 Katherine married. She died in 1977 at the age of 86.

After the war, Marjorie took up barnstorming. However, by 1930 she too had given up flying. She died in 1975 at the age of 79.

Eddie went on to found the Stinson Aircraft Corporation in Detroit, Michigan. He was a leading figure in aviation during the 1920s. On January 25, 1932, he was fatally injured when he crash-landed on a Chicago golf course while demonstrating one of his planes to a customer.

Today Stinson Field operates as a municipal airport, a fitting memorial for a remarkable flying family.

pilings and mounds of steel girders when, on April 5, 1917, four JN-4 Jennies slid down out of the south Texas sky to land on the dusty, former cotton field. Their timing was impeccable; the following day the United States entered World War I. Pilots of the four aircraft were Captains George Reinburg and Bert Atkinson, recent arrivals from the 1st Aero Squadron; Captain Carl Spaatz, whose name was consistently rendered as "Spotts" by the local press; and Eddie Stinson, a civilian flying instructor who lived in San Antonio. According to local legend, since none of the buildings were complete, the flyers slept that night underneath the wings of their planes. The more prosaic truth is that the planes were housed in tent hangars, familiar to the pilots along the border, while the men were also quartered in tents.

To Build an Air Service

Within weeks, 4,400 recruits flooded the new field. Wooden mess halls and latrines sprang up, but most of the men lived in ordered rows of pyramid-shaped tents. The 3d Aero Squadron was joined by a 4th and 5th, along with a Provisional Aero Squadron which acted as a reception agency for the crowd of new men arriving daily. In June 1917, Colonel Charles E. Tayman arrived to take control and discovered that he had only 25 officers to supervise approximately 5,700 men.



A group of Jennies prepare to lift off the grass. In the shelter are cadets awaiting their turn at the controls.

One of Colonel Tayman's first steps was to name his new command. At his suggestion, on June 11, Brigadier General James Parker, Commander of the Southern Department, issued an order designating the field as Camp Kelly in memory of Lieutenant George E.M. Kelly, the first American military aviator to die in the crash of a military airplane. Six weeks later, another order renamed the installation Kelly Field. At the same time, the Army issued instructions for the formation of a further 27 aero squadrons and announced plans to establish a major supply depot on the field. These proposals confirmed what was already obvious: the original site chosen by Foulois was simply too small. Enlisting the aid of the local Chamber of Commerce, Colonel Tayman and his staff promptly obtained lease agreements for another 1,800 acres of land immediately to the north northwest of the original site. That original site was now known as Kelly Field Number 1 and the new area as Kelly Field Number 2. With speed crucial, the government agreed to the terms in mid-July, and workers began constructing wooden hangars, mess halls, barracks, and other buildings.

The owner of one 200-acre tract, Emmett B. Cocke of San Antonio, was amazed at the speed at which the contractors went to work. Out of town for five days, Cocke returned to find his tenants moved off the land, a large portion of the current cotton crop already chopped down, a small railroad spur laid from the main line to the artesian well, a barn cut in half, and one tenant cottage converted into a construction crew headquarters and drafting room.

Standard plans called for a field to have 12 hangars, along with the necessary other structures. With 24 hangars, Kelly Field Number 2 was twice as large, and even then space was tight. Planners in the Aviation Section decided to establish several other fields in the immediate area, numbering rather than naming them. Plans called for an eventual total of some six Kelly Fields, most of which were simple auxiliary fields with few, if any, permanent buildings. However, Kelly Number 5 took on a life of its own,

expanding into a permanent installation and becoming Brooks Field in February 1918.

The contractor for the construction of facilities on Kelly Field Number 2 was Stone and Webster. Eventually, this Massachusetts firm erected over 100 buildings on the field, including 24 hangars, 12 large barracks, officers' quarters, mess halls, repair shops, garages, and administrative buildings. This long array of buildings ran a mile and a half east to west along a road from the site of today's operations hangar to the current location of the Texas Air National Guard facilities. Up to 6,000 workers were on the field, with as many as 50 or more at work on any single building. Laborers were on the job seven days a week.

Stone and Webster turned the new facilities over to the Air Service officially on October 1, 1917, but by that time the field was already in use. With 24 large hangars and 3 big classroom buildings, Kelly Number 2 could accommodate 500 flying students, up to 75 instructors, and over 200 planes. Almost immediately the field became the center for flying instruction, and the hangars and shops at Kelly Number 1 became almost entirely repair and maintenance facilities. In addition, Kelly Number 1 remained the home of the reception and training center.

By the fall of 1917, the Provisional Aviation School Squadron officially was known as the Recruit Camp. On October 1 the squadron was renamed as the First Training Brigade. From the beginning, it served as the first military home for the thousands of recruits coming into the Aviation Section (later, Air Service). During the first two months of operation at Kelly Field, new recruits helped build their own quarters and assisted hired laborers in clearing and leveling the flying field. From early June, with the arrival of Colonel Tayman, some order began to emerge from the chaos of hurried expansion.

Officials began testing and classifying recruits by skill, assigning them to various aero squadrons on the basis of this testing. Once a new aero squadron reached a total of 154 men, it transferred to a new location for final training. The first of these squadrons left Kelly in August. By October 1917, Kelly Field had formed and transferred 80 squadrons to other locations. Another 50 left the base in November.

This flood of men was beyond the capacity of the First Training Brigade, so in December a Second Training Brigade was formed, followed by a Third Training Brigade in May 1918. On Christmas Day 1917, despite the number of squadrons leaving for other locations, just under 39,000 men were crammed onto the field. By this time, Kelly was the clearing house for all the other aviation training fields. On the average, six squadrons left the field every day, most to form the initial cadre at other training fields. Over 15,000 enlisted men shipped out in January, but another 47,774 recruits arrived to replace them. Only the arrival of 750 newly minted officers from the

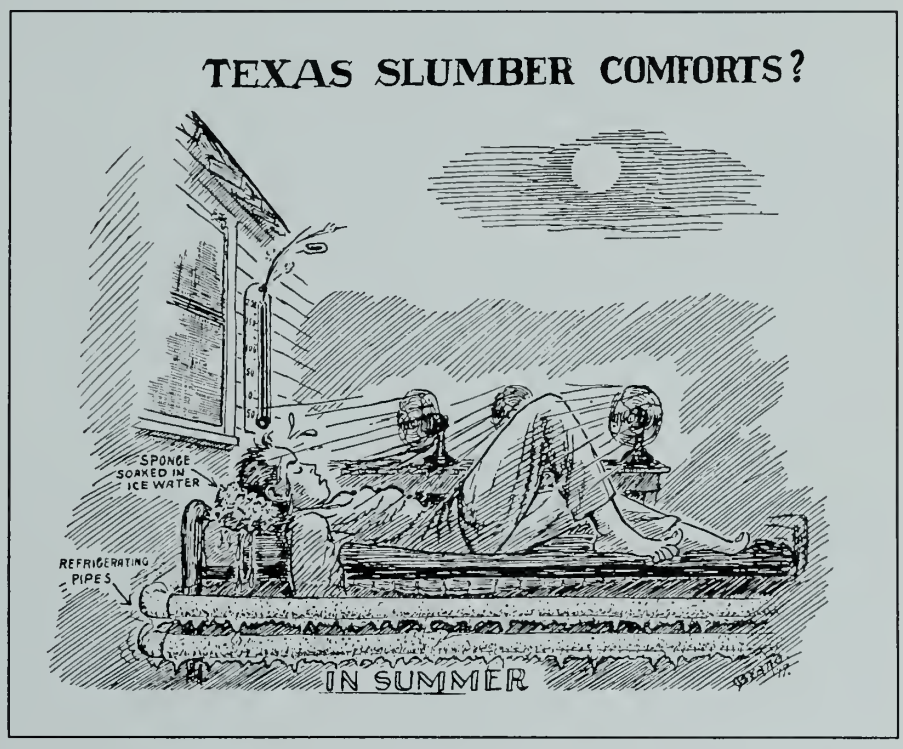


At the main gate in 1917, visitors turned left to Kelly Number 1 or right to Kelly Number 2.

Army training center at Leon Springs, Texas, averted a potential crisis in providing supervision for this number of men.

Camp Life at Kelly Field

The confusion at Kelly Field during the first harried months of Air Service expansion was similar to that at camps all across the country. Nevertheless, for the thousands of young men who arrived during those early days, the experience was a shock. "Do you remember," rhetorically asked one of the writers of a Kelly Field wartime yearbook, "arriving at Kelly Field after withstanding a long, hard trip, when food had given out 36 hours early, with great anticipation of becoming a great aviator and of making fame by bombing old Hun "Bill's" palace--finding yourself lined up in front of a row of tents, your feet in black mud and the wind blowing a gale, trying to obey the orders -- 'prepare for inspection'?" For much of the first few months, the entire field was covered constantly in blowing dust. For some time food was cooked in the open, and the unfloored tents had no stoves. Cold water baths were all that existed for most men, and many of those were entirely open.



In 1917 San Antonio was still a small town, filled with ever present reminders of its recent frontier past. Prospective pilot S. E. Elliott recalled it as a "roaring, wild west town" filled with soldiers with money to spend and plenty of local citizens willing to help them spend it. "San Antonio," he wrote, "seemed to abound in saloons that were decorated with extremely long cow horns on the walls, and with glass enclosed, realistically preserved habitants of the state, including coiled rattlesnakes and hairy tarantulas, to greet the visitor's startled eye from many nooks and corners." Encouraged by local patrons, the youthful soldiers discovered that after more than a few toasts to the heroes of Texas, to "the beautiful women of Texas and, in consideration of us foreigners, one to President Wilson, even the faces of the tarantulas seemed a bit genial." Lieutenant John Loeblein, who served as a maintenance officer at Kelly, remembered the excitement of the weekly dances held at the Officers' Club on Kelly Number 2. "Many of the squadrons on the field had their own orchestras," he recalled. "And, believe me, they were good." The officers' dance was always on Friday night, and the enlisted men held their dances on Saturday evening. Only one squadron at a time could hold a dance, and that squadron provided the musicians. "It was also understood," said Loeblein, "that officers would not hang around at the enlisted men's dances and vice versa." The dances were the supreme social event of the week, and dozens of local girls attended, each accompanied by chaperones. While soldiers going into town could experience a rowdier time, social activities on the field were tightly monitored. Still, Loeblein remembered that the "moonlight dances were just out of this world."

Aside from visiting the saloons of San Antonio or participating in a weekly dance, soldiers at Kelly could, time permitting, make use of other recreational facilities. The Young Men's Christian Association ran a reading room, for example, and sponsored a number of theatrical productions. Out of this effort emerged a traveling troupe called the Kelly Field Players, which toured northern Texas and southern Oklahoma for

several weeks with a musical show entitled "The Follies Militaire." The troupe included singers, acrobats, comics, mimics, musicians, and actors. Female parts were played by young ladies from Mrs Matlack's Finishing School (chaperoned by Mrs Matlack, of course). Kelly also had a glee club, hobby clubs, and numerous athletic teams.

Flight Training -- World War I

Instructors on Kelly Field Number 2 began teaching the rudiments of flying to student pilots in August 1917, but it was not until September that the Flying Department actually came into existence to supervise and control this training. Pilot instruction itself was something of a novelty in the United States during this period. Numerous schools existed to teach flying, of course, but there was no standardized course of instruction. Shortly after the United States entered into the war, a board of officers visited Camp Borden to examine the methods of the Royal Canadian Air Force. Rather than spend time debating the pros and cons of various systems, the Army simply adopted the Canadian system of training.

Under this system, all prospective pilots began their training as aviation cadets. Their road to the cockpit began with eight weeks of ground instruction at one of six schools set up in May 1917 at civilian universities around the country. Two more schools appeared later. Naturally, the quality of instruction was uneven at first, but standards improved rapidly as instructors grew more familiar with the material. The eventual curriculum included 35 hours of instruction on aero engines, 31 hours on observation aviation, 20 hours on signaling, 24 hours on gunnery and bombing, 21 hours on aircraft construction and theories of flight, and 2 hours on meteorology. Prospective pilots also got regular instruction in drill and ceremonies.

By regulation, all young men accepted for pilot training had to be 25 years-of-age or younger (a requirement waived in some cases); preferably have two or even three years of college or technical training; and be athletic, robust, honest, and reliable. Many were impatient with the ground school portion of their training and were eager to get into airplanes as quickly as they could. Following ground school, successful candidates were given a rating of Junior Military Aviator and then they went to flight school for six to eight weeks. Commissioned after successfully completing this portion of the training program, the cadets then went on to an advanced school for a brief one-month course in a particular specialty--pursuit, bombardment, or observation. New pilots accumulated only about 90 flying hours before being considered ready for the front, and many had less.

Flight training proceeded in a series of steps called stages, beginning with the dual instruction stage. With an instructor initially handling take-offs and landings, the aviation cadets were coached through increasingly difficult maneuvers. Normally, at some point between four and nine hours of this, the instructor turned the student loose to solo. This stage might include up to 25 more flying hours, with some additional dual instruction thrown in. The solo stage was followed by cross-country and formation flying and acrobatic instruction for another 25 hours or so. During each stage, the cadet also continued to attend ground classes on various subjects such as navigation and the proper conduct of officers.

Arrival of the First Cadets

On August 1, 1917, a group of 11 young men assembled at Kelly Field prior to entering the School of Military Aeronautics at the University of Texas in Austin. These young men were all prospective flying cadets, and they became the fourth of 81 classes to attend the Austin ground school before returning to Kelly to earn their wings. The first three classes had bypassed Kelly, going overseas for their flight training.

As the group stood at the edge of the field, Major Seth Cook approached, offering to take them up one at a time for familiarization flights in his JN-4 Jenny. All of them eagerly accepted, and the first chosen to fly with Major Cook that day was John Ireland. Thus, Ireland became the first cadet to go aloft from Kelly Field.

Flying was risky in the early days. Four of Ireland's classmates were killed in training. The first was Cadet Sidney J. Brooks, a San Antonio native who became Kelly's first training fatality. Only 1 of the 11 made it overseas; Hugh Brewster shot down two German planes in September 1918 while flying a SPAD VIII with the 49th Pursuit Squadron.



A flight instructor advises a group of aviation cadets (identified by the white bands on their hats).



Ground instruction included rigorous examinations for these aviation cadets.

In 1918 the Air Service replaced this stage system with the British-developed Gosport system, sometimes referred to as the "all thru" system in US manuals. In the Gosport system, a single instructor stayed with the same group of students throughout primary flight training, and the various stages overlapped. A key feature of this system, which was tested at Brooks Field, was the use of a speaking tube by the instructor, who now sat in the rear seat of the aircraft and could correct errors verbally.



The Curtiss JN-4D or Jenny lined the Kelly flightline in World War I.

While it was a distinct improvement over existing training methods, the Gosport system was not fully adopted until late in 1918, meaning that the vast majority of Kelly's aviation cadets learned their skills in the older stage system. Whichever system was followed, flying was still a rough-and-ready business. One manual urged pilots to "look over the machine in a general way" before they climbed into the aircraft and added the admonishment to "be sure the controls are working properly."

Fatal crashes were, fortunately, fairly rare, but non-fatal accidents were frequent. Cadet Carl Foster remembered one such incident:

> After some tight eights over the cemetery and a tower for the other point on a Saturday afternoon, I came in for a landing over Hangar 1 directly into the sun in full view of the men lined up across the field for retreat. Before I could land, Lieutenant Heartfield came plunging into me from my right side and we crashed. I recall my nose was terribly itchy and as I crawled out of what was left of my plane, Ray Coward came out in a motorcycle and said 'Get in,' to which I recall telling him I would walk in, and proceeded to fall flat on my face.

Foster did not remember anything else until awakening in the infirmary with the doctor sewing up his nose. The driver of the field ambulance (known locally as the meat wagon) later told him that on the way to the hospital he had stopped at a drug store for refreshments. Coming out, the driver said he found Foster and Lieutenant Heartfield engaged in a fist fight over who would have the first drink. Cleared by a court of inquiry, Cadet Foster was soon back in the air.

His case was not atypical. Another student pilot remembered losing control of his Jenny and crashing from about 75 feet. "To be sure my folks would recognize me when they shipped me home in a casket," he said, "I covered my face with both hands." Opening his eyes hesitantly, the young pilot found "my feet were still there." Getting out, he reported to the officer in charge and was promptly put into another plane, apparently a technique designed to ensure that pilots would not lose their nerve after a

crash. "This time," reported the apparently unshaken flyer, "I kept my nose down and came out O.K."

The standard basic and primary training aircraft at fields in the United States during World War I was the Curtiss JN-4 Jenny. This was an improved version of the same plane taken into Mexico by the 1st Aero Squadron in 1916. A standard two-seat biplane, with its two cockpits in tandem, the JN-4 had a wingspan of just over 43 and a half feet and an overall length of a little over 27 feet. The power plant of most JN-4 models was a 90-horsepower OX-5 engine, which gave the plane a top speed around 80 miles an hour. The JN-4H version, along with an improved JN-6, used a 150-horsepower Hispano A engine manufactured by Wright-Martin, although the top speed of these heavier aircraft was not much higher. If sometimes unforgiving, the Jenny inspired a great deal of affection among pilots, many of whom acquired surplus JN-4s for stunting and barnstorming after the war. From a manufacturing standpoint, the JN-4 was the first successful, mass-produced aircraft in the United States, and one estimate suggests that a million men learned to fly at the controls of a Jenny.

Serving as an instructor under these conditions could be nerve-wracking. Lieutenant John Loeblein remembered instructors using the cockpit fire extinguisher to knock out panicked students who would not release the controls. In a similar vein, M. Gould Beard recalled struggling with his instructor over the stick while practicing spin recovery. Beard was worried that his instructor, Lieutenant John St. John, thought he had "frozen" at the controls and would ground him. Apparently, this was not the case. Beard was soon flying again and soloed shortly afterward, but Lieutenant St. John "never went up with me again."

The Impact of the Armistice

By the end of 1917, despite all the chaos of beginning a training program from scratch, aviation cadets at Kelly had accumulated almost 6,000 flying hours. This total increased steadily during early 1918 as the staff and instructors at the field grew more familiar and comfortable with the organizational structure and the training program. In February student flyers logged 9,500 hours in the air, and they accumulated another 12,000 hours in March. On March 18, 1918 alone, with over 100 aircraft available at the field, cadets were in the air a cumulative total of 1,033 hours. The sky over the field was very crowded during daylight.

From this peak, though, the number of cadets in training and the number of flying hours began a slow but steady decline. By August 1918 the number of cadets had dropped below 300 at Kelly for the first time since December 1917, and in September Kelly transferred its instructor training to newly constructed Brooks Field. Still, at the armistice on November 11, 1918, a total of 1,459 pilots had graduated from flight training, and 298 instructors had completed the advanced course. Many others were still in the training program when the war ended, and one recalled that there was little rejoicing at the news that now they would not get the chance to prove themselves as aviators in combat. Cadet Beard recalled that

> There was dead silence for about 30 seconds, and then the whole barracks sat up and started cursing at the floor, damning the Germans for having lain down on the job before they had a chance to get over there and prove their merit as aviators.

Training nevertheless continued. Ten aviation cadets won their wings and commissions the day after the armistice.

Despite the overwhelming public demand for immediate demobilization, the Air Service (created out of the Aviation Section in 1918) continued to seek at least a handful of potential trainees. Air shows encouraged continued enlistment, without great success, and at one point the service announced it would fly prospective pilots from their homes to the nearest training field. Most of this effort was meant to spur continued contributions to the final "Victory Loan" campaigns, but clearly, too, the Air Service saw a need for a steady trickle of recruits into the flying training program, even as the number of actual flying units shrank abruptly.

Aerial Border Patrol

By early 1919 only four pursuit, four bombardment, a handful of observation, and a few balloon squadrons were all that remained of the aerial armada rushed into being during the war. All the



The 11th Aero Squadron and its DeHavilland DH-4s formed part of the aerial border patrol in the early 1920s.

pursuit and bombardment squadrons, along with four observation squadrons, formed a wing of three groups at Kelly Field. With ground schools closing and primary training concentrated at Carlstrom Field, Florida, and March Field, California, the focus of the flyers at Kelly shifted to maintaining aerial patrols along the Mexican border. The bandit activity and border raids common a few years earlier were becoming more and more infrequent as stability slowly returned south of the border, but there were enough alarms to justify the patrol and allow the Air Service to maintain at least a proportion of its strength on regular flying duty.

The Army stationed some of the border patrol squadrons in California, but three observation squadrons and all four bombardment squadrons (all flying the American version of the DeHavilland DH-4 two-seater light bombing and observation aircraft) operated from small fields between El Paso and Brownsville, with their headquarters at Kelly Field. A fourth observation squadron joined the mix early in 1920.

Most of the flying was routine, but the landscape was rugged and empty. Advances in aircraft design and performance had increased the reliability of airframes and motors, but the aircraft were still fairly fragile combinations of fabric, wood, and wire. The romance of flying appealed to the public, but it was, in reality, a highly hazardous undertaking. Mechanical failures caused aircraft to make bumpy, dangerous landings in desolate areas, sometimes on the wrong side of the border.

In August 1920, Lieutenants Harold G. Peterson and Paul H. Davis suffered engine trouble and had to make a forced landing after mistakenly following the Concho River into Mexico instead of paralleling the Rio Grande. Bandits captured them as they tried to hike to the border, and their captors sent a ransom note demanding $15,000 for their release. Cavalry Captain Leonard Matlack offered to carry the ransom across, taking half the money on his first trip in exchange for Lieutenant Peterson. When he returned bearing the rest of the money, Captain Matlack overheard the bandits planning to kill them both. Forewarned, Matlack drew his pistol at the exchange, got the drop on the bandits, faced them down, and then rode away with Lieutenant Davis and the remaining money.

Active aerial patrolling of the border began to wane in the last few months of 1920. Airmen concentrated their attention on experiments involving radio communication with ground troops, aerial gunnery practice, and formation flying. A few months later, the 1st Pursuit Group moved from Kelly to Ellington Field, Texas, and then to Selfridge Field, Michigan, and many of the men and pilots of the 2d Bombardment Group (originally designated as the 1st Day Bombardment Group) transferred to Virginia to prepare for a series of bombing experiments under the command of Brigadier General Billy Mitchell.

Consolidation of Training

The armistice of 1918 ended the immediate need for large numbers of pilots. Some training continued. The need for Air Service pilots did not disappear completely, but the vast majority of training centers closed. During 1919 the Air Service concentrated both ground school and primary flight training at March Field, California, and Carlstrom Field, Florida. Congress authorized limited enlistment of flying cadets.

If a cadet survived the course at Carlstrom or March, he went on to advanced training. Observation students went to school at Fort Sill, Oklahoma, but no schools existed for pursuit or bombardment training. Advanced flying students in those specialties received their training with either the 1st Pursuit or 1st Bombardment Groups, both at Kelly Field until 1921. The flying groups provided instructors for both ground classroom and aerial training in tactics, aerial gunnery, and battle maneuvers. At the same time, service with active units gave them experience with supply, engineering, operations, and Army paper work. Pursuit students progressed from the Jennies to DH-4 two-seaters and then to SE-5 fighters left over from the war. Bombardment students transitioned to DH-4s, too, with a handful moving on to Curtiss and Martin NBS-2 series aircraft when those became available. When the 3d Attack Group moved to Kelly Field in 1921, it provided a fourth specialty. Again, students flew the DH-4, the all-purpose Air Service craft of the early 1920s.



The American-built DeHavilland DH-4s, such as this one with the 104th Aero Squadron on border patrol, were a mainstay of light bombing and observation squadrons in the 1920s.

Between mid-1921 and mid-1922, Kelly completely restructured its training program in conjunction with a total reorganization of the Air Service. The primary flying school at March closed in 1921, and the Carlstrom school closed in early 1922. At the same time, the Air Service opened a new primary school--the only one--at Brooks Field and concentrated all advanced training at Kelly. For the next two decades, San Antonio was the Army's flying training center, and every young man who succeeded in becoming an Army aviator had finished his schooling at Kelly.

Advanced Flying Training in the 1920s

Primary training at Brooks Field began with the traditional classroom instruction before progressing to flying training in the still present JN-series two-seaters. The flying cadet who survived this six-month course became a Junior Airplane Pilot and then moved a few miles west to Kelly for another six months (initially eight months) of specialized training before he could win his commission and wings.



In 1922 Kelly set up an advanced flying school under the aegis of the 10th School Group.

By the Numbers

At a time when the only thing keeping a pilot's body from almost certain death was constructed of linen-covered spruce, fir, or mahogany, it was easy to see the importance of establishing procedures to ensure the proper handling of aircraft. This operational checklist is made up of actual regulations set forth by the US Air Service in 1920:

1. Don't take the machine into the air unless you are satisfied it will fly.

2. Never leave the ground with the motor leaking.

3. Don't turn sharply when taxiing. Instead of turning short, have someone lift the tail around.

4. Never get out of the machine with the motor running until the pilot relieving you can reach the engine controls.

5. Pilots should carry hankies in a handy position to wipe off goggles.

6. Riding on steps, wings, or tail of a machine is prohibited.

7. In case the engine fails on takeoff, land straight ahead regardless of obstacles.

8. No machine must taxi faster than a man can walk.

9. Do not trust altitude instruments.

10. If you see another machine near you, get out of the way.

11. If an emergency occurs while flying, land as soon as you can.

12. Pilots will not wear spurs while flying.

The advanced flying school was run by the 10th School Group. Although the group coordinated its training activities with those of the primary school at Brooks, no higher headquarters existed to supervise all training until 1926.

From 1922 to 1927, the advanced school on Kelly Number 2 followed a course of instruction known as the A Plan. Under this plan, cadets took 75 hours of classroom instruction as well as actual flying training over a 12-week period. The first step in flying involved transition training to acquaint cadets with the DH-4. Once he soloed, the cadet flew on his own except for occasional check flights with instructors. James Burwell, who passed through the advanced flying school in 1927, recalled that

> When he graduated, a student had a total of approximately 200 hours' flying time, but knew nothing of instrument flying, radio beam work, or many of the other phases taught today. Even so, he was regarded as being one of the best trained pilots in the world, and it was not unusual, near graduation time, to see representatives of commercial lines on the field offering students who were about to graduate contracts calling for three to four times the rate of pay they were to receive in the Army.

Rarely was there a shortage of applicants. With the number of cadet slots limited by budget restraints to less than 200 during many years, the Air Service could take the "cream of the crop." For example, of 1,288 young men who sought to become pilots in 1925, only 362 passed the cadet examination, and the Air Service only took the top 108. Attrition further reduced cadet ranks. Of the 202 cadets who entered training in January 1920, six months later only 61 had graduated. Another 43 remained in training, while 98 washed out.

To enlist as a flying cadet, one had to be unmarried; a US citizen; between the ages of 20 and 27; with a high school education, good character, excellent health, and sound physique. Non-rated Army officers could also apply for flight training as could Regular Army enlisted men who met the rest of the requirements. Later, the education requirement was raised to include two or three years of college, preferably in an engineering field.

The Kelly Number 2 flightline became a familiar sight to Army flyers of the 1920s and 1930s.



In the 1920s, Kelly Field used this facility as its operations office and tower.

Lucky Lindy

Perhaps the most vivid example, certainly the best known to the general public, of the kind of young man who sought Army flight training in the 1920s was Charles Lindbergh. Minnesota-born, Lindbergh was not a typical cadet. He knew how to fly even before beginning training at Brooks Field, and in fact flew into San Antonio in his own plane (which he kept at the city's Stinson Field while going through training.) Yet, even with this experience, or perhaps because of it, Lindbergh still found the Air Service course difficult and demanding. He had to unlearn many bad habits formed during his field-hopping and barn-storming days, but by applying himself he avoided the ignominy of failing and became one of just 33 of the original 104 cadets in his class to complete the first half of training in September 1924.

Even before entering the Army flight training program, Lindbergh had a reputation as a lucky pilot, escaping injury despite several rough landings and crashes. That reputation gained further embellishment during the advanced course. On March 6, 1925, only nine days before graduation and commissioning, he was part of a flight of SE-5s (American-built versions of the World War I British single-seat fighter) practicing aerial gunnery and tactics near Galveston. Lindbergh's section included Cadet Philip Love and Lieutenant C.D. McAllister. When Cadet Love made a mock attack on one of the other planes, Lindbergh and McAllister dove with him to confirm the kill, but as they pulled up, the two SE-5s collided with, as Lindbergh reported, "a slight jolt followed by a crash."

Incredibly, neither man was hurt, and both jumped from their tangled aircraft moments later. Lindbergh lost the ripcord to his parachute, his goggles, and a vest-pocket camera. The other planes scattered immediately after the collision, as pieces of wood and fabric were flung into the air, but they returned at the sight of the two parachutes, circled briefly, then straggled back to Kelly Field. Lindbergh and McAllister landed safely and were soon back in the air aboard a pair of new SE-5s. This was not Lindbergh's first parachute descent, having jumped during several exhibitions in his earlier career, but this time it was not by choice. He and McAllister thus became the twelfth and thirteenth members of the local Caterpillar Club, an honor bestowed only upon Army and Navy pilots who successfully "took to the silk" after trouble in the air. But it was not the incident itself that added to his reputation for luck, it was the fact that this was the first class to be issued parachutes.



"Lone Eagle" Charles Lindbergh is perhaps the best known graduate of Kelly Field's advanced flying school.

Two years after finishing his aviation training at Kelly Field, Lindbergh emerged as a national hero when he became the first man to fly solo across the Atlantic. Since he flew as a civilian, and made a point of coming down the gangplank of the ship that brought him home in a civilian suit, the fact that he was a captain in the Air Reserve when he made the flight remains little known today.

American Aviators

If Charles Lindbergh is the most famous graduate of the Kelly advanced flying school, he was only one of many Kelly flyers who would shape the future of American military aviation. Some of these men were already experienced flyers when they became connected to Kelly. Carl Spaatz, for example, learned to fly at San Diego and as a captain piloted one of the first four planes to land at Kelly in April 1917. After World War I, Spaatz briefly commanded the field he helped inaugurate. After commanding United States

Strategic Air Forces in Europe in World War II, he capped his career by serving as the first Air Force Chief of Staff.

The vast majority of those who helped build the Air Corps into the Air Force went through Kelly's advanced flying school. Hoyt Vandenberg, for example, who became the second Air Force Chief of Staff in 1948, won his wings at Kelly in 1924, just as Lindbergh began his year of training.

Elwood R. "Pete" Quesada, leader of XII Fighter Command and Ninth Air Force in Europe, emerged from Kelly with wings and commission in September 1925, scant months after Lucky Lindy. As a very junior lieutenant, Quesada joined then-Major Spaatz, Captain Ira Eaker (a Kelly-trained pilot during World War I), and others in pioneering aerial refueling during the endurance flight of the *Question Mark* over Los Angeles in 1929. Better known to a wider audience than many of these men, Curtis LeMay, head of Strategic Air Command for a decade and then Air Force Chief of Staff, finished flight training at Kelly Field in October of 1929, a month history recalls for a far different cause.

The list could go on much longer. Indeed, nearly every officer who would emerge in a leadership role during World War II and the first years of an independent Air Force climbed into the cockpit of a Kelly Field airplane. General George Brown, Air Force Chief of Staff in 1973-1974 had, however, the distinction of being the last one who did. He graduated in 1942 just as pilot training was on the verge of leaving Kelly.

Air Service to Air Corps

In July 1926, President Calvin Coolidge signed the Air Corps Act, the result of several years of debate on how best to reorganize and strengthen Army aviation. The act officially changed the name of the Air Service to the Army Air Corps and also created the post of Assistant Secretary of War for Air (a post unfilled until the 1940s). It also authorized some expansion of the Army's air arm, in particular an increase in officers from 919 to 1,650 by 1932. To meet its officer goal, the Air Corps required an additional 1,485 commissioned pilots. Given that a large percentage would wash out, suffer fatal crashes, or simply give up during training, planners estimated that this would necessitate bringing in some 500 flying cadets per year. Brooks Field was too small to handle that many student flyers, so in 1926 the Air Corps reopened the primary flying school at March Field. In addition, the schools at both Brooks and Kelly were joined under the umbrella of the Air Corps Training Center, headquartered at Duncan Field (Kelly Number 1) and commanded by Brigadier General Frank Lahm. Within a few months, Assistant Chief of the Air Corps Brigadier General James Fechet recommended a series of changes to the training program that eliminated the A Plan in favor of the so-called B Plan.

B Plan Training

The first class to enter primary flight training under the B Plan arrived at March and Brooks Fields in November 1927. Instead of six months at the primary fields, these cadets would spend eight, with the course of instruction now broken into two four-month periods, including the transition from primary to basic. The successful cadet would then move on to Kelly Field for the final four months of advanced training in the same four specialties that existed under the previous training program.

Of course, by the late 1920s, the venerable JN-4 was gone from the primary fields, replaced by the Consolidated PT-1 Trusty. The main basic training aircraft, though, remained the old DH-4, modernized by salvaging wings, tails, and engines from early models and adding them to fuselages framed with welded steel tubing. When cadets reached Kelly, they were introduced to actual combat aircraft, albeit older models which were increasingly obsolescent. These included Boeing PW-9 and Curtiss P-1 pursuits, Keystone LB-5 and Martin NBS-1 twin-engine bombers, Curtiss A-3 attack planes, and Douglas O-2 observation aircraft.

Cadets in Training at Kelly

From the late 1920s through most of the 1930s (as the country experienced the debilitating effects of the Great Depression, sound came into movies, and dictatorships in Europe and Asia pushed the world closer to war), cadet life at Kelly followed a series of familiar routines that created fond memories for hundreds of young men. Nearly all the cadets coming from March and Brooks Fields (and later Randolph Field) noticed some big differences between where

they had been and their new, albeit temporary home. Many of the buildings were older, certainly not as nice as those at just opened Randolph. And, aside from a brief period in the early 1930s under Colonel Henry B. Clagett, discipline was less strict. The cadets coming to Kelly already knew the rudiments of military life and had some experience in flying; their task was now to simply hone their skills for a particular purpose. Beirne Lay, Jr, a 1933 Kelly graduate, captured the essence of this in his popular 1937 book I Wanted Wings (a memoir of his training later made into a motion picture). Lay noted that up until they arrived at Kelly, he and his fellow cadets had simply learned to fly. Now, he realized, they would learn how to turn their airplanes into weapons.



Physical training took up a portion of each afternoon.

Typically cadets arose around 5:30 in the morning. Some classes began the day a little earlier; in many years, reveille came as late as 6:00 a.m. Flying began early, with cadets on the flightline by 7:00. When the weather was good, they might fly until 11:00, with lunch around 11:40. Most of the early afternoon was spent in ground school, and organized athletics took the rest. Supper was served around 5:30, and many evenings cadets would return to the flightline for more flying. They normally had their weekends and Wednesday afternoons off.

Discipline was looser than during their primary training period, but it was not ignored. A demerit system similar to that used at the primary schools was also used by the staff at Kelly. Cadets guilty of infractions found themselves confined to barracks or writing essays on the error of their ways. One former cadet remembered writing a 1,000 word treatise on "Airdrome Discipline" after being charged (falsely, he claimed) of taking off late for a cross-country flight.

But these occasional restrictions did not stop the cadets from enjoying a rich and varied social life. There was an informal Cadet Club in San Antonio's Gunter Hotel. Its location varied from the rooftop to the basement bar, and celebrations of important milestones in their training would often result in a boisterous dunking in the nearby San Antonio River. Officially, cadets were not supposed to be married or have cars with them. Unofficially, some cadets were married and many entrusted their cars to either their wives or local girlfriends to keep off-post until the weekends. Bandera, a small town some 30 miles west of San Antonio in the hill country of central Texas, was a favorite weekend retreat. It offered a number of dude ranches and small resorts with horseback riding, tennis courts, and private cabins. Cadets also journeyed as far as Corpus Christi on the Gulf of Mexico for deep sea fishing and parties on the beach.

Life on base was not entirely unpleasant either. Whatever else cadets recalled about their time at Kelly, one thing they apparently all agreed on was the quality of the food in the mess halls. Even the instructors on the field remembered meals fondly. George Beverly, an instructor who later commanded Kelly, particularly praised the Sunday breakfasts, while Beirne Lay, Jr, recalled steak, broiled lobster, and duck along with mounds of fresh vegetables. Even with fixed mess funds, mess officers found it easy to buy large quantities of excellent food in the local area, and during the depression the quality and quantity of it made a long-lasting impression.

Every cadet was at Kelly because he wanted to fly. It was the central facet of their lives and something they all had in common. Many, steeped in the romantic imagery of gallant aces during World War I, sought berths in the pursuit section. Pursuit was widely acknowledged to be the most glamorous of the specialties taught at the school, and the nimble Boeing P-12, which appeared in the early 1930s, inspired particular affection. But cadets ended up in a particular section only partly by choice; evaluations by instructors during the earlier phases of training played an important role, too. Some cadets used logic rather than emotion in selecting their specialty. Cadet Lay, for example, chose bombardment because he believed it would help him get a piloting job with an airline. In any case, cadets had the opportunity to fly the aircraft of the other sections as well as those on which they primarily trained.

As advanced students, the cadets at Kelly did get some actual experience with guns and bombs. Machine guns were installed in Hangar 16 for specific training missions, but at least according to one of the armorers at the field in 1940, no live ammunition was loaded.

During the 1920s, the open fields to the west of Kelly served as a bombing range. Most of the ordnance dropped there was inert, though during construction of the San Antonio Aviation Cadet Center in 1941 workmen did uncover some live munitions. By the 1930s, the Air Corps used a range at Matagorda Island on the Texas coast for gunnery and bombing practice. At Kelly itself, the Air Corps maintained a skeet range to provide some training in the leading of aerial targets. Each pilot was authorized some 600 12-gauge rounds annually, and just before duck or bird season the range was always crowded with eager shotgunners, including base staff officers and instructors.

The earlier phases of training took place almost entirely in daylight. Night flying was introduced during advanced training and received particular emphasis. One approach involved groups of cadets flying to various fields near Galveston or Dallas during the day, then attempting to return to Kelly after

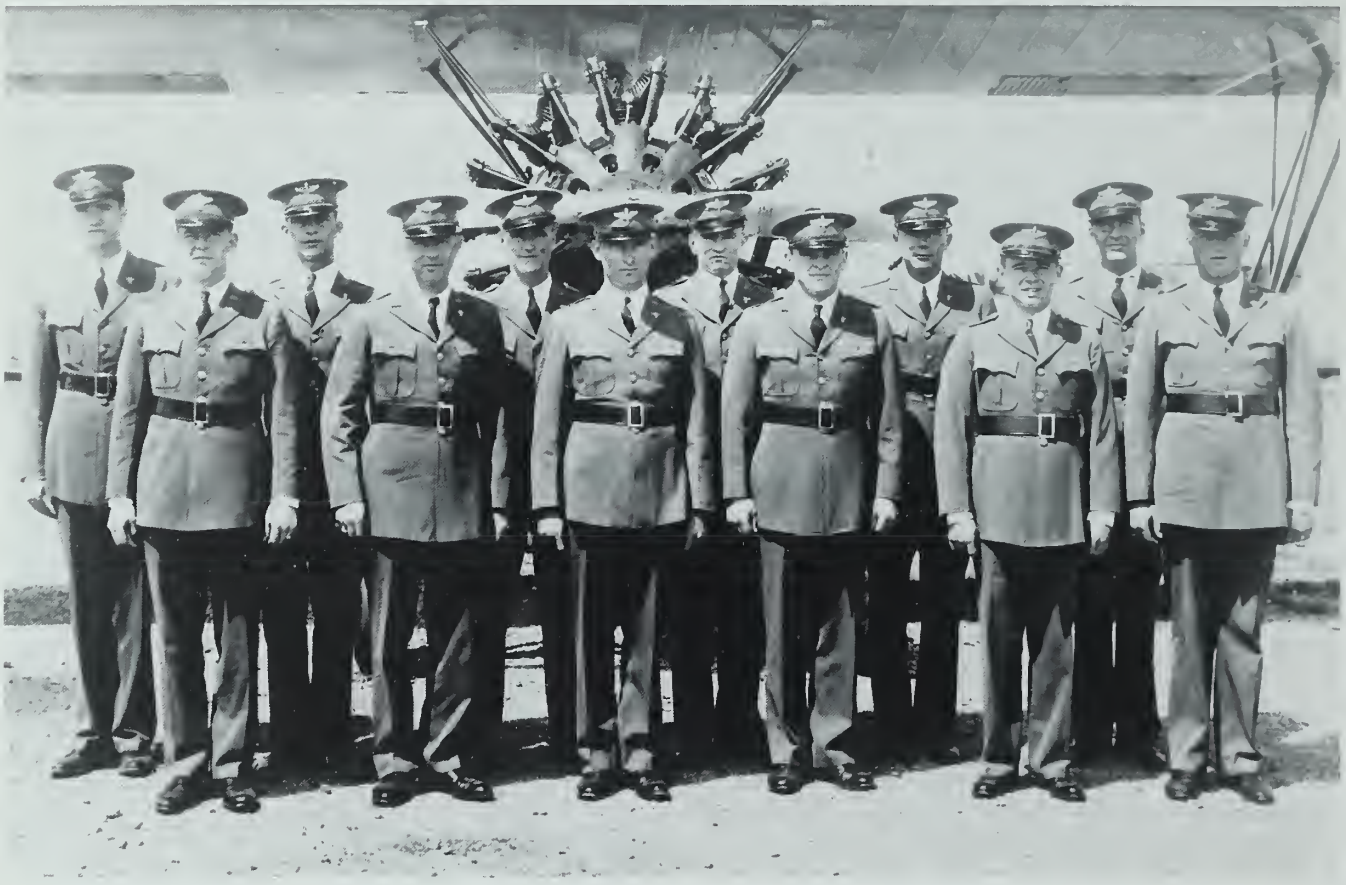


Many fondly recalled the good food--and plenty of it--available during advanced flying training at Kelly.

dark. There was no effort to fly in formation during these night flights. Cadets took off individually and tried to find their way to Kelly by compass or by highway lights and airport beacons.

Getting lost and running out of fuel were constant worries, as were wind currents which often blew planes wildly off course or played havoc with dead reckoning navigation. During Beirne Lay's time at Kelly, an entire section of observation cadets failed to reach Kelly on an overnight flight from Galveston. With a strong front preventing airlines and contract mail aircraft from flying, the commercial air fields turned off their beacons that night to save money, leaving the cadets to find their way by flares and luck into various landing spots. No one crashed, but one young pilot found himself in Laredo, blown 200 miles off course.

Instrument flying was a novelty when it appeared at the advanced flying school in June 1930. Experiments in "blind" flying began in the 1920s, and Army pilot William Ocker developed a device known as the Ocker Box which provided essential instrument information to a pilot and let him counteract the effects of vertigo and lack of visibility. When Ocker came to the advanced flying school as an instructor, he enlisted the assistance of young Lieutenant Carl Crane and gained the support of Brigadier General Frank Lahm, head of the training center. Initial instrument training took place in daylight with the cadet under a hood in one cockpit and an instructor with unobstructed visibility in the other. Over time, the cadet learned to fly a complete triangular course while under the hood. When Air Corps' efforts to deliver the mail turned into a public relations fiasco in 1934, the need for even more rigorous instrument



In the 1930s, cadets wore a slate gray uniform. For dress occasions, they substituted white shirts for their dark gray ones.

training became painfully evident. Yet, despite that humbling experience, progress was slow until the demands of World War II added both urgency and increased funding. Even so, the introduction of even minimal instrument instruction at the advanced flying school marked the first time such a course was included in the curriculum of any military flying school worldwide.

Aircraft of the late 1920s and 1930s were sturdier than their predecessors, constructed of stronger materials to designs that reflected ever greater understanding of the principles of flight, and equipped with more powerful and reliable engines. Yet, even as passenger travel on commercial airlines became more common, flying remained a dangerous business. This was particularly true when that flying took place under less than ideal conditions of worsening weather and poor visibility. Cadets at the advanced flying school often flew at night or in uncertain weather, times when airlines with passenger safety to consider would routinely ground their aircraft. They were "military fliers" (in Beirne Lay's phrase), after all, and they ultimately flew for a different purpose than an airline.

Between 1922 and mid-1937, of the 2,051 cadets who entered training at the advanced flying school, 39 died in aircraft accidents. The memoirs and reminiscences of cadets from this period invariably mention at some point accidents and the death of a classmate in training. In many ways, the tubular steel-framed aircraft of the 1930s were less forgiving in a crash than earlier aircraft of wood and fabric. Of course, not every accident was fatal. Beirne Lay recalled a two-week period in which there was some sort of incident every day, but only one resulted in the cadet class solemnly parading to a mortuary chapel. Night flying multiplied the hazards. On one relatively short 1933 flight from Fredericksburg, Texas, to Kelly, Cadet Charles Rogers died when he crashed in fog shortly after take off. A classmate, Lawrence Fulwider, was luckier. Lost in the same fog and his gas gauge needle resting on empty, Fulwider climbed to 2,000 feet and bailed out. He was surprised to hit the ground only moments after his chute opened, and with the sunrise he was even more stunned to realize that he had landed in a shallow valley between peaks that rose well over his altitude when he jumped. They loved to fly, but such things drove home the lesson of just how dangerous this seemingly glamorous profession could be. As one cadet noted, "This was no kids game." Nor was it something on which they could afford to brood. The class buried Cadet Rogers, and the following day they went on with their work.

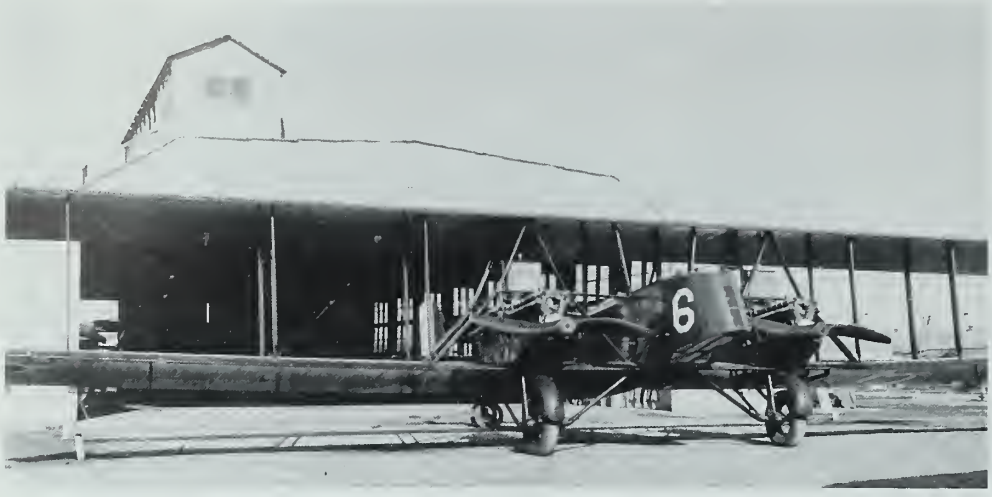
Graduation was the culmination, the time when aviation cadets (now known as flying cadets) gained their wings and officially became pilots. The ceremonies marking the occasion were impressive. The professionally printed invitations to family and friends often included photographs of the field, and the day before the big event each class gathered for a formal group portrait. Cadets marked the time by another milestone as well: the purchase of their first regulation uniform. Blouse, shirt, breeches, cap, and above, all boots were all custom tailored and fitted. Along with the regulation Sam Browne belt, sword, and other insignia, the total cost might run as high as $200, a hefty expense when a cadet's monthly pay was $75 and that of an active duty second lieutenant only $207. Most saved for the outlay by having the Air Corps deduct $20 each month from their pay.

Although sometimes a last minute violation could keep a man from graduating, this was rare. By this time, the weeding out process was complete. On graduation morning, all the cadets assembled for the single most impressive moment of their careers to date, the fly-by pass-in-review. Forming up some distance away from the field, each section thundered by the reviewing stand in tight formation, bombers first, followed by the pursuit, attack, and observation sections. An hour later, spotless in new uniforms, with brass shining, the class sat through an address by the Chief of the Air Corps. Then, one at a time, they came forward to receive their wings and, in most cases, commissions as well. With budgets tight, only a lucky or particularly skilled handful would go on to serve for any time on active duty. Most found themselves in the relative obscurity of the reserve. But even there they could fly.

Changes at School in the 1930s

The Air Corps struggled during most of the decade of the 1930s to cope with depression-era budgets. In the middle of the decade, the provisional General Headquarters Air Force (known as GHQ Air Force) became permanent. It controlled all Air Corps

flying units while the Air Corps oversaw logistics and training. At the same time, the Air Corps began stressing all-purpose training instead of channeling cadets into specialties. Specialties did not disappear immediately, but future bomber pilots in particular spent more time in pursuit and attack aircraft while at Kelly.



In the 1930s, Curtiss-Martin NBS-1 twin-engine bombers were still in use at the advanced flying school at Kelly Field.

One reason for this change was an increased emphasis on the role of the bomber in the emergent doctrine developed at the Air Corps Tactical School at Maxwell Field, Alabama. Another factor was the increasing age and obsolescence of the aircraft available at the field. Active duty bomber units began taking delivery of the remarkable Martin B-10, a fast, twin-engine, all metal monoplane with retractable landing gear, and a powered turret, in 1934. It was not long before the possibilities of the Boeing four-engine prototype, which would become the B-17, further altered Air Corps concepts of bombing.

But, during these years, cadets still made do with the Keystone and Martin twin-engine biplanes of the 1920s. Pursuit students relied on the delightful P-12, an acrobatic aircraft which was, however, far slower than the B-10, and observation students still flew the Douglas A-25, a biplane derived from the earlier O-2. Only cadets in the attack section had the benefit of a relatively new aircraft: the A-12, a monoplane with fixed landing gear, powered with a 690-horsepower Wright engine, introduced in 1934.

Lacking a true advanced trainer, the Air Corps opted in 1935 for the Seversky BT-8, a single-engine monoplane with a fixed undercarriage. Extremely rugged (one cadet later recalled the pairing of the P-12 and the BT-8 as the combination of "a feather and a truck"), the BT-8 sufficed, if only just. It was joined on the Kelly flightline the following year by the similar BT-9, but more advanced aircraft did not arrive at the field until funds began to flow more freely and Army aviation began expanding in the last years of the decade.



Late in the 1930s, BT-9 trainers began arriving at Kelly's advanced flying school.

Expansion

During the 1930s, while the attention of most Americans focused on dealing with the economic and social effects of the depression, national leaders were acutely aware of the rising danger posed by the aggressive expansionism of both Germany and Japan. With public sentiment firmly against any direct American involvement overseas, officials focused their preparedness efforts on measures which could be promoted as defensive. Amid considerable debate on the exact path to follow, there was widespread agreement among both military and civilian leaders that a crucial component of any defense plan would be airpower. By the late 1930s, as storm clouds gathered in Europe and Asia, money to build up American military aviation slowly began to flow. In January 1939, President Franklin D. Roosevelt asked Congress for $300 million for "defensive aviation." There was a loud outcry among those who favored neutrality and no preparation, but a majority voted with the President.



Cadets in Class 40-E begin taxiing for takeoff and the graduation fly-by.

Presidential pronouncements on aircraft numbers beguiled the press and public, but Air Corps planners knew that planes required pilots, aircrews, mechanics, landing fields, and all the other crucial elements which turned aircraft into useable military tools. Between July 1939 and July 1941, Air Corps strength increased from 20,500 officers and enlisted men to over 152,000. In 1939 planners anticipated training 1,200 pilots annually, but by the end of 1940, with war in Europe now a reality, the goal jumped to 7,000 and then kept rising.

Production of trained pilots in such quantities was beyond the capacity of the existing training fields. During 1939 the Air Corps began using civilian facilities for primary training. Staff planners expected Randolph Field to handle basic flight training, with both Kelly and Brooks Fields serving as advanced schools. However, it soon became clear that additional sites were needed, along with an administrative reorganization of Air Corps training in general. In 1940 the Air Corps opened the Southeast Training Center at Maxwell Field, Alabama, to supervise training in the eastern third of the country and the West Coast Training Center at Moffett Field, California, to do the same for the western United States. In the center, the Gulf Coast Training Center, headquartered at Randolph Field, supervised the activities at all three training fields around San Antonio. In mid-1941 War Department restructuring also resulted in the creation of the Army Air Forces, although the term Air Corps did not immediately disappear from either the public or military vernacular. Indeed, the Air Corps remained as the chief component of the new organization.

Field Improvements

At Kelly Field, construction to improve and replace aging World War I facilities was already underway by 1936. Funds allocated for the Works Progress Administration could not be used to purchase operating supplies or machinery, but they could be used for construction. One of the first fruits of this at



In 1940 new construction at Kelly permanently altered the landscape of the field.

Kelly was the miniature range building, completed in May 1937 at the east end of the existing flightline. This unique structure, the only one of its kind ever built, was supposed to assist in training aerial observers.

Other new structures soon appeared as well. In 1938 Congress provided funding for construction of a new barracks for enlisted men, a large operations hangar, sets of quarters for both senior officers and senior enlisted men, a cadet barracks, and a new headquarters and classroom building. These new buildings sprouted in the previously open fields to the east of the old wooden hangars on the Kelly flightline, and all were complete by mid-1940. Over 50 years later, they are still in use, often for nearly identical purposes. The large enlisted barracks was so superior to the deteriorating 1917-period facilities that the men referred to it as "Buckingham Palace," a nickname now shortened to simply "The Palace." Directly across a grassy mall, the structure built as cadet quarters became visiting officer quarters and the home of Kelly's Officers' Club.

Other improvements came in the form of concrete runways and parking ramps. The earliest of these first appeared in 1925, a 30-foot-wide concrete and asphalt ramp parallel to the hangar line. By 1941 additional construction meant that this ramp was now 300 feet wide and over a mile long. Clearly visible in old aerial photos, it is often incorrectly identified as a runway. In fact, student pilots still took off and landed on the large grass area to the southwest of the flightline, although the advent of larger, more powerful aircraft was beginning to demand actual concrete landing surfaces. Two were built by 1941, one running some 3,600 feet southeast from the east end of the hangar line ramp, crossing over the boundary between Kelly Field and Duncan Field (once Kelly Field Number 1 and since 1925 a separate field and the home of the San Antonio Air Depot). The second 1941 runway ran almost due south from the west end of the ramp for about 1,500 feet.

Neither was entirely sufficient to meet the demands placed on Kelly in the next few years. Between 1942 and 1944, construction created an extensive runway and ramp complex, much of which remains a part of the taxiway system today.

Dark December

Years of often bitter and angry debate over American foreign and defense policy came to an

abrupt halt on December 7, 1941. The surprise attack by Imperial Japanese forces on the American naval base at Pearl Harbor and Army airfields and other installations in Hawaii, followed by Japanese attacks on American forces in the Philippines, catapulted the United States into World War II. If not yet fully ready to meet the demands of war, the Army Air Forces was already expanding in terms of facilities, personnel, and aircraft.

Training aircraft were at a premium during the first years of the war. In too many cases, schools relied on antiquated or inadequate equipment, a situation which was not entirely new. A 1937 inspector general's report bluntly stated that Kelly Field's aircraft were "largely made up of the oldest and most out of date airplanes in the Air Corps" and urged that no further bombardment training take place at the field.

Colonel Arnold N. Krogstad, commandant of the advanced flying school, protested that graduates from the school were joining tactical units three times a year, with no complaints about their skill or ability to fly bombers--or any other type of aircraft. Krogstad admitted that some of Kelly's aircraft were "obsolete," but he argued that the situation was improving as new, more modern types arrived.

However, as Air Corps expansion got underway in 1938, Kelly's aircraft inventory still included large numbers of obsolete and obsolescent planes. Among these were thirteen P-12 and nineteen BT-8 trainers for pursuit pilots, fourteen O-25 and two O-38 observation aircraft, and twenty-four A-17 attack planes. Bombardment students were forced to train in a handful of B-4, B-7, and B-18 aircraft, with only the B-18s resembling the more modern bombers in development. With only three B-18s assigned, the advanced school was forced to have some students fly only as copilots on many training flights. As a temporary expedient, Kelly borrowed a B-18 from Randolph Field and obtained four C-40 aircraft. These were hardly bombardment aircraft, but they at least gave some students an opportunity to fly a more modern, multi-engine plane.

In late 1939, BC-1 trainers began to arrive at the field, with small numbers of AT-6 Texans supplementing them in the spring of 1940. By May the school had fifty-two AT-6s and needed seventy-three more. The opening of additional training schools was a persistent drain on Kelly's aircraft inventory since the field had to send many of its aircraft to the new schools. At least officially, Kelly was a twin-engine school, and both the BC-1 and the AT-6 were single-engine aircraft. Unfortunately, nothing else was available. For nearly a year, future pilots received their advanced training on the Texan. Not until September 1942 did Beech AT-10 and Curtiss AT-9 twin-engine trainers arrive at Kelly in suitable



AT-6 Texans were the predominant trainers at Kelly during World War II.

numbers. Neither was a truly satisfactory substitute for the frontline aircraft in use (no really good twin-engine trainer appeared until modified B-25s were available in 1944), and the first class to make use of them, Class 42-K, was, ironically, the last flying training class at Kelly.

To speed production of pilots, officials shortened the advanced training program from 12 to 10 and then to 9 weeks and also began overlapping the induction of new classes. In 1939 classes entered every six weeks. By 1940 they arrived every five weeks, allowing nine classes to graduate on an annual basis. But, by 1942 the pace of instruction, coupled with a shorter program, meant 11 graduating classes per year, overworking instructors and placing enormous stress on the training aircraft. Starting with Class 38-A, which began training in October 1937 and was arguably the first class of the expansion period, through Class 42-K, 7,123 cadets entered advanced training at Kelly and 6,845 graduated, well over twice the number graduated (2,771) from 1922 to 1938.

Before prospective pilots could begin training, of course, they had to be selected from among the even larger number of applicants. The first tests to assist in the identifying process were ready shortly after Pearl Harbor. Similar test batteries to help select candidates for bombardier and navigator training were rushed into use at about the same time.

Officials planning expansion in the immediate pre-war period expected primary flying schools to operate four-week military orientation programs for aviation recruits, but this proved unworkable. In 1941 each of the three regional training centers established a replacement training depot. That organized by the Gulf Coast Training Center appeared at Kelly Field in August. With facilities already limited, the advanced flying school commander, Colonel Frank D. Lackland, supported construction of new buildings in an area west of the main Kelly flightline known as The Hill.

Most of the emphasis in what became a nine-week program at the replacement depot was on physical conditioning and instruction in such fundamentals as military courtesy. The test batteries put in place in late 1941 helped separate candidates for pilot training from those better suited for navigator or bombardier training. Inevitably, as the number of men entering training grew, the classification process threatened to overwhelm the basic training program. So, in 1942 the War Department established a classification center to handle this function. By June 1942, the various programs for reception and classification at Kelly Field became the separate San Antonio Aviation Cadet Center, operated directly by the Gulf Coast Training Center. (In 1948 this World War II expedient became Lackland Air Force Base.)

Instructor Pilots and Navigators

Finding enough instructors to handle flying and navigator training was a profound difficulty, and the Army Air Forces never fully solved the problem. Older reserve pilots found themselves back on duty alongside ex-Navy fliers and newly-minted pilot instructors. The Army offered direct commissions to many civilian instructors if they successfully completed a brief course, with the caveat that they had to meet existing physical standards. Over half could not, so the Army tried to entice them into the enlisted reserve but with almost no success.

The Gulf Coast Training Center submitted a proposal for a Central Instructors School in June 1942, and it activated at Kelly Field in August. Army officers already rated as pilots went through a four-week basic instructor's course. Civilian pilots began with a 20-day introductory course, basically a transition course to military aircraft, followed by either an elementary instructor course or a utility pilot course.

The shortage of instructor and utility pilots had an effect on the navigator training program, too. Demand for navigators outran supply, particularly early in the war, not only because there was a shortage of skilled navigation instructors but because someone had to fly the planes they trained aboard. In July 1941, the Barksdale Field navigation school moved from Louisiana to Kelly, taking up residence in buildings near the flightline and adding to base overcrowding. As soon as facilities were available on The Hill, it moved. Many of the first graduates became instructors for contingents which followed, and the program underwent a series of revisions to reflect combat experience. A total of 607 men graduated from the Kelly navigator program, before it moved to Hondo Army Air Field, 45 miles west of San Antonio, in 1942.

Overhaul, Maintenance and Supply

When Kelly Number 1 became crowded with the tents, barracks, mess halls, and classrooms associated with training flying cadets, officials began shifting flying north to the adjoining Kelly Number 2. More and more, Kelly Number 1 was home to support activities, including supply and maintenance. A San Antonio Aviation Supply Depot had existed since 1914 when it was established at Fort Sam Houston. With flying operations on the increase at Kelly, Air Service officials decided to form an aviation general supply depot at San Antonio. Construction began on a large warehouse at Kelly Number 1 in October 1917. In June 1918 the depot completed its move from downtown San Antonio to the new warehouse. The Kelly depot was an immense concrete and steel structure. Almost 900 feet long and 300 feet wide, the building was divided by a pair of tracks leading directly from the main rail lines south of the field and was internally subdivided into 11 separate warehouses. Between 200 and 300 railcars arrived with new material and left with issue items each month. Post-war demobilization slowed the pace of depot operations considerably, but it remained open, partly because so many flying units were concentrated on the field from 1920 to 1921.



The large supply warehouse constructed in 1918 was a Kelly landmark until the early 1980s.

During the two decades between 1922 and 1942, while flight training at Kelly Field dominated the public image of the Air Corps, the less glamorous but equally essential tasks of overhaul, maintenance, and supply took place in shops and warehouses to the immediate south. When the Air Service consolidated its training in the early 1920s, it took similar steps with regard to maintenance and supply. In 1921 the Air Service repair depot at Love Field near Dallas moved to Kelly Field Number 1. There it joined the existing supply depot in becoming the San Antonio Air Intermediate Depot. At the time, there were only three such depots in the country, and the San Antonio facility had responsibility for the largest geographical area of the three.

In 1925, recognizing the difficulties inherent in having two divergent functions at a single field, each responding to a different chain of command, the Air Service separated Kelly Field Number 1 from the rest of the field and named it Duncan Field. During the remainder of that decade, and throughout the 1930s, between 500 and 900 civilian employees repaired and overhauled aircraft, engines, and other components and handled the supply function for approximately the middle third of the United States. The rapid expansion of the Air Corps during the late 1930s increased the workload at all depots, including the one at San Antonio. In October 1941, a new organization titled Air Service Command took control of all supply and maintenance operations aside from those basic tasks handled by personnel at the flying fields.

American entry into World War II brought an even larger surge in maintenance and overhaul workloads at the depots. The number of workers at the San



During the war, large numbers of women joined the Kelly work force, and it wasn't long before someone nicknamed them "Kelly Katies."

Antonio depot skyrocketed from 913 in January 1939 to over 20,000. One unforeseen development amid this expansion was a tremendous increase in the number of women employed at the depot, a situation mirrored all over the country as "Rosie the Riveter" became a national icon. But with Kelly Field's flight training program straining to accommodate the wartime flood of aviation cadets and Duncan Field expanding its own maintenance, overhaul, and resulting flight testing operations, the sky over the adjoining fields became dangerously crowded, and it was becoming almost impossible for the depot to meet its obligations.

By late 1942, Kelly Field no longer occupied the paramount place in flight training it held during the lean interwar years. Other advanced flying bases existed around the country, and it was clearly easier to relocate flying training to one of these bases than to move a major depot in wartime. Thus, in January 1943 the various involved headquarters concurred in the consolidation of Kelly and Duncan Fields into a single facility. The merger did not take place immediately, but over the next three months flying training slowly wound down along the old Kelly flightline. As cadets and training aircraft moved out, in moved depot activities. There was some debate during this period over which name the field would have, but sentiment and tradition persuaded officials to keep the name Kelly Field.

Officially, the two fields merged, or more accurately reunited, on April 21, 1943, but this merely



During World War II, Kelly workers repaired aircraft like the P-51s (above).

reflected what was already a de facto situation by that date. Quietly, without fanfare, an era in the history of American military aviation ended. The time when young men who wanted wings would find their goal in the skies over Kelly Field was over.

World War II

Kelly's World War II mission turned the base into a huge industrial complex. A new organization, the San Antonio Air Service Command, managed the increased supply and maintenance workloads. Kelly employees overhauled, repaired, and modified aircraft (including B-17s, B-25s, B-29s, P-51s, and C-47s), engines and related equipment. Rapid production lines established a rate of overhaul on accessories, bombsights, guns, and electrical equipment that set records for both military and commercial repair agencies.

Kelly's work force grew tremendously during the war as well. In 1939 old Duncan Field had less than a thousand civilian employees and only a few military personnel. By the middle of 1945, over 19,000 civilians and 4,000 military worked at Kelly.

Nearly 40 percent of the civilians were women. "Kelly Katies" were San Antonio's counterparts to "Rosie the Riveter," women everywhere who did nontraditional work, contributing greatly to the successful war effort. They worked in nearly every shop at the field, including engine overhaul and aircraft fuel tank repair.

Storage space on Kelly was at a premium. The field annexed Normoyle Ordnance Depot, soon called East Kelly, in 1945 to house the massive amounts of incoming excess equipment. In addition, Kelly established an outprocessing center for the thousands of soldiers who received their discharges at the end of the war.

When the Allies declared victory in August 1945, America began to demobilize as rapidly as it had in 1918. Over 3,000 Kelly civilians resigned or retired within weeks of V-J Day. Most of the Kelly Katies went home. Nevertheless, more and more AT-6, P-51, and B-29 aircraft landed at the field as disposal and aircraft storage took up more and more of Kelly's time and space. Hundreds of aircraft were parked in the grassy fields between the runways.

Maintenance workers stopped work on very heavy bombers and began supporting the occupation forces in Europe and Japan by fixing air transportation, communications, and weather systems. In 1946 San Antonio Air Technical Services Command became the San Antonio Air Materiel Area (SAAMA).



After the war, P-51s lined the area between the runways awaiting disposal.

In July 1947, President Harry S. Truman signed the National Security Act which, among other things, created an independent United States Air Force. Over the next few years, the youngest of the armed services separated itself from the Army way of doing things. In January 1948, Kelly Field became Kelly Air Force Base.

The Cold War

The end of World War II did not mean the end of American military assistance and responsibility. By 1947 American leaders were aware of the potential



The B-29 outdoor production line, known as the "Great White Way," allowed round-the-clock maintenance of the big bombers.

threat posed by communist expansion and had created a dynamic policy of economic and military aid to other nations. Never again could the United States retreat behind its ocean boundaries.

In June 1948, the Soviet Union, in a move to push the Allies out of Berlin, closed all water, rail, and highway links to the western part of the city. Forced to choose between abandoning West Berlin or supplying all goods by air, the western powers began a round-the-clock airlift of vital supplies and material into the beleaguered city. The Berlin Airlift, nicknamed Operation Vittles, became the largest air cargo operation to date. The prime workhorse of the airlift was the C-54 Skymaster transport, and Kelly was the only depot in the country repairing and overhauling replacement Pratt and Whitney R2000 engines used on that aircraft. By the end of 1948, San Antonio Air Materiel Area's Supply Division had shipped 1,317 R2000 engines worth $19 million for the airlift.

Korean War

The outbreak of the Korean War in June 1950 found Kelly once again responding almost overnight. On July 1, 1950, over 2,000 aircraft sat between Kelly's runways. Six months later over half of those had returned to operational units. At the same time, thousands of workers returned to the base. Many of them were Kelly Katies, who no longer had to prove they could do the work as well as any man. The base's maintenance line went into full-steam production to recondition B-29s and P-51s for overseas service. Work continued into the night by use of special outdoor lighting. This aircraft production line earned the nickname of the "Great White Way" as the glow of the lights reflected on the aluminum skin of the bombers lit up the evening sky.

The Jet Age

During its first decade of independence, the Air Force found its aircraft, engines, accessories, and

support equipment became increasingly sophisticated and complex, requiring use of new technologies and innovative programs to meet the challenges of the future. By 1951 the Convair B-36 was arriving at Kelly in ever-increasing numbers. With its powerful R4360 engines, the B-36 rapidly took the place of the B-29. It was the first American bomber capable of reaching any target on earth, hence its nickname--Peacekeeper.



The XC-99 was so closely associated with Kelly that few remember it originally was built for Strategic Air Command.

Six R4360 engines powered the XC-99, which arrived at Kelly in 1950. As the largest transport plane to date, the XC-99 (a converted B-36) set many world cargo-hauling and distance records. The longest flight, 12,000 miles to Rhein Main Air Base, Germany, began in August 1953. Carrying 61,000 pounds of vital cargo, it flew to Germany via Bermuda and the Azores and came back a week later carrying another 62,000 pounds. Every place the XC-99 landed, newspaper, radio, and television reporters were present to convey to the public the excitement of the flight. In 1957 the Air Force, decided it did not need large transport aircraft like the XC-99. Ironically, USAF development of the massive C-5 began only seven years later.



Kelly workers performed a major modification program on the B-58 in 1962.

By the mid-1950s, jet aircraft had become extremely important to the Air Force. The Boeing B-47 Stratojet was the first jet aircraft repaired in Kelly's Texas-sized maintenance hangar built in 1957. The B-58 Hustler was another important addition to the Air Force's inventory. As America's first supersonic bomber, it could fly higher and faster than any other bomber in the world. In 1958 the San Antonio Air Materiel Area opened the B-58 Logistics Support Management Office, forerunner of a major organizational realignment where worldwide weapon system management functions were separated organizationally from internal depot operations. In the early 1960s, the B-52 was the air materiel area's major depot-level maintenance workload. This era in Kelly's history ended in the spring of 1993 when the Air Force shifted Kelly's B-52 workload to Oklahoma.



The B-52 was a stable workload for Kelly mechanics for over 20 years.

In addition to jet aircraft, workers at the San Antonio Air Materiel Area also had management and maintenance responsibility for a wide variety of jet engines, beginning with turbo-props like the T34, T54, and T56. The first T56 engine, power plant of the venerable C-130 Hercules, arrived at Kelly in November 1955. Today, Kelly personnel are still repairing the time-honored engine.

Vietnam

Kelly's workload remained relatively stable until the mid-1960s when American efforts to prevent the fall of the South Vietnamese government led to direct US involvement in Southeast Asia. In 1964 all air materiel areas began supporting operations in the Pacific on a 24-hour-a-day basis. During the build-up of US forces in Vietnam, Air Force Logistics Command sent teams of supply personnel to the Pacific. Kelly had no lack of volunteers; about 89 workers traveled throughout the Western Pacific on temporary duty, establishing supply centers. Kelly also sent maintenance teams to help with the war effort. Jet engine mechanics assisted in the creation of an engine repair facility at Bien Hoa Air Base in South Vietnam; other Kelly workers served on special F-5 modification teams. Those who remained in San Antonio also strove to meet the demand for materiel and aircraft maintenance to support our troops in the Pacific.

Weapon systems used in Southeast Asia managed by the San Antonio Air Materiel Area included F-102, F-106, A-37, O-2, and F-5 aircraft, while major maintenance workloads centered around aircraft engines, airfield lighting equipment, life support system items, and aerospace ground equipment. Specific maintenance workloads included B-52 aircraft modifications; T34, T56, and J79 engine overhaul; and recoverable-aerospace item repair.

In the early 1970s, Kelly workers were deeply involved in President Richard M. Nixon's Vietnamization Program. Personnel volunteered to go to Vietnam to teach materiel management techniques to the South Vietnamese. Others worked at a frantic pace to transfer A-37s, T-38s, and F-5s, along with 18.3 million pounds of cargo, to the South Vietnamese Air Force in Project Enhance Plus.

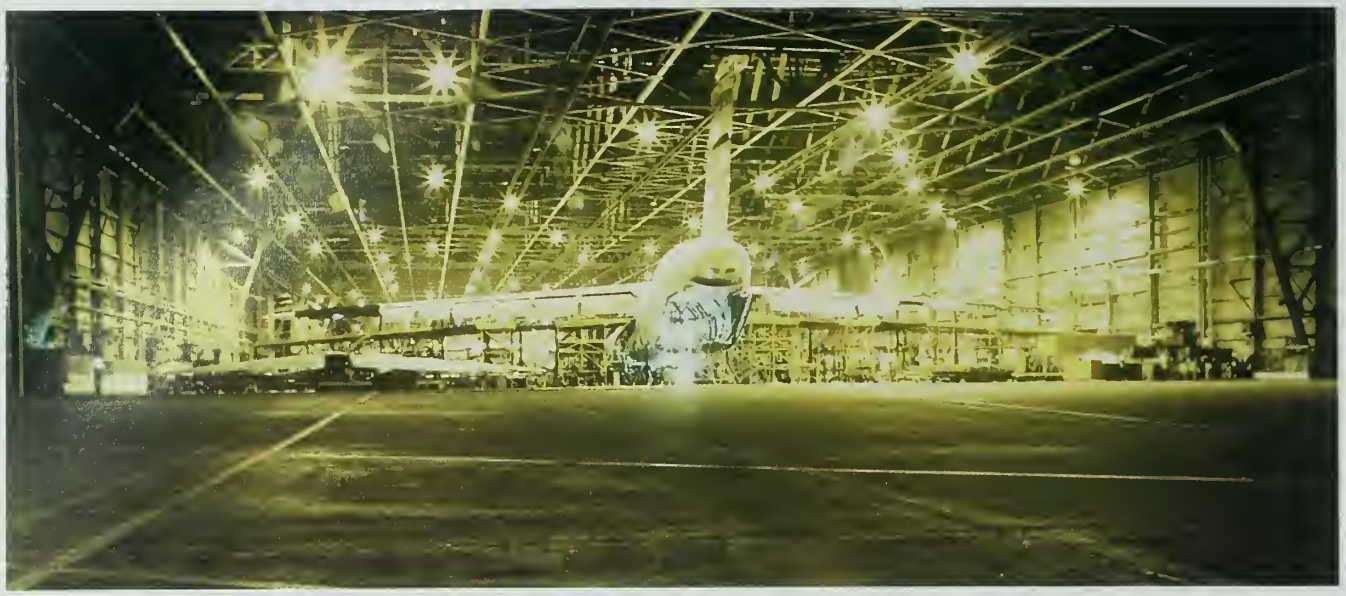
One of the happier programs Kelly people supported was Operation Homecoming, the return of prisoners of war held in North Vietnam. Lackland Air Force Base and Fort Sam Houston were designated as reception areas in San Antonio because each had hospital facilities to handle the needs of these men. Kelly was the reception point for 11 flights which carried 20 Air Force and 12 Army men. Kelly Air Force Base took great pride in welcoming home these men who had spent years in captivity.

During Enhance Plus, Kelly personnel set records in shipping A-47, T-38, and F-5 aircraft to Vietnam.





Operation Homecoming flights began bringing former POWs to Kelly in February 1973. Crowds of sightseers were kept to a minimum, but excited family members made each arrival a festive occasion.



As early as 1970, the Air Force recognized the need to modify the C-5's wings. This project became the largest modification program ever managed by an air logistics center.



Technicians work on one of the many jet engines that arrive daily for repair. Kelly's engine workload is its largest in terms of dollars budgeted and workload hours.

Changes

In 1974 the San Antonio Air Materiel Area changed its name to the San Antonio Air Logistics Center, but the dedication and support its people gave to the Air Force mission remained the same.

The C-5, the world's largest aircraft, entered the Air Force inventory in 1969. Kelly had both management and maintenance responsibility for the C-5 and its TF39 engine. In the 1980s, Kelly handled the largest modification program ever managed by an air logistics center with the program to strengthen the wings on the C-5A. The F100 engine became a major engine workload for the center in the late 1970s as F-15s and F-16s entered the Air Force inventory in increasing numbers. Management and maintenance of the F100 was complicated by its unique, modular design. In addition, the F100 was the first engine to measure time between overhauls in terms of cycles, or throttling up and down actions, rather than flight hours. Most recently, the center has managed the Air Force's newest transporter, the C-17 Globemaster III.

Americans have always looked to the future. For over 30 years, Kelly has been involved in space ventures. In 1964 maintenance personnel built three Apollo capsule trainers for the National Aeronautics and Space Administration (NASA), and Kelly has supplied NASA with its required liquid propellants

from the very beginning of America's push into space. In 1979 the space shuttle Columbia, perched piggyback atop its mother ship, a Boeing 747, arrived at Kelly for the first time for a refueling stop on its way to a launch at Florida's Kennedy Space Center.



Since its first arrival in 1979, the space shuttle, piggy-back atop its 747 mother ship, has been a familiar site at Kelly.

Into the Twenty-First Century

In the predawn hours of December 19, 1989, Kelly learned of the role it would play in Operation Just Cause, the US military effort to end the corrupt dictatorship of Panamanian strongman Manuel Noriega. A few hours later, the first aircraft from Panama landed, carrying Americans wounded in the fighting. During Just Cause, Kelly served as a reception point for over 250 wounded service men and as a transit point for over 8,200 troops who deployed in and out of Panama.



At the end of Operation Desert Storm, Kelly's flightline, once again, was the scene of many joyful reunions.

Only eight months later, Kelly found itself supporting another American military effort overseas. In August 1990, Iraqi troops overwhelmed the tiny, oil-rich nation of Kuwait and threatened Saudi Arabia. Response was immediate as the United States and other allied nations sent military forces to Southwest Asia to halt any further aggression and force the troops of Saddam Hussein out of Kuwait. By the time allied forces had routed the Iraqis in March 1991, Kelly had moved thousands of tons of material and 4,700 passengers and deployed over 17 million pounds of munitions to the area. Kelly workers also surged maintenance work on C-5 and B-52 aircraft; F100, TF39, and T56 engines; and other vital war materiel.

With the end of the Cold War, Kelly went through many changes as the military budget grew increasingly smaller. Many of the changes stemmed directly from the results of a series of proposals known as Defense Management Review Decisions or DMRDs. These proposals changed nearly ever facet of Air Force logistics, including the merger of Air Force Logistics Command with Air Force Systems Command into the new Air Force Materiel Command. Other DMRDs altered the air logistic center's financial operations, communications-computer systems support, and management of consumable items. An increased emphasis on competition also revised the way the San Antonio Air Logistics Center conducted



Using state-of-the-art stereolithography equipment, Kelly workers used lasers to produce models of parts, which helped reduce both the manufacturing time and costs of developing item prototypes



The air logistics center's physical sciences labs played an important part in developing new technological processes and testing to ensure contractor-manufactured items met performance specifications

its business as the center had to compete with the other services and private companies for workloads. Another change caused by the DMRDs was the transfer of supply functions from the air logistics centers to the Defense Logistics Agency, which took control of Kelly's warehouse space, bringing an end to what had been a fundamental part of Kelly operations since World War I.

Continued efforts to cut defense spending by relocating missions and closing bases put Kelly and the San Antonio Air Logistics Center at risk in May 1993 when the Base Realignment and Closure Commission (BRAC) added Kelly and three other air logistics centers to the list of places it considered closing. The threat to the base, and thus to the economic health of San Antonio, galvanized the city and the public. Commissioners were impressed enough by both the outpouring of public support and the data which showed the kind of job Kelly workers were doing to remove the center (along with the other air logistics centers) from the closure list. With the publicity generated by the closure threats, few, if any, residents of San Antonio and surrounding communities were left unaware of the enormous impact Kelly had on the local area. More than just the possible loss of jobs and incomes, the threat to Kelly was a threat to an institution to which three generations of local people had devoted their professional lives.

By 1995, however, it was clear that the victory two years earlier was only the first one needed if Kelly and its air logistics center were to stay in business. Despite Department of Defense recommendations to keep all five air logistics centers open, the 1995 Base Realignment and Closure Commission decided to add them to the list of possible closures.

Once again the base and the city marshaled their energies to "Keep Kelly Open," but this time the arguments of civic and military leaders, as well as the passion of the Kelly workforce and local community, fell short. By a vote of six to two, the commission decided to recommend the San Antonio Air Logistics Center for closure and realign Kelly with adjoining Lackland Air Force Base. This became effective on July 13, 2001. In an attempt to protect Air Force readiness and save as many local jobs as possible, the Defense Department began advocating a new concept called privatization in place. The idea was to turn over the center's depot maintenance workload to private conractors who would hire former Kelly workers to perform the work in former Kelly facilities. Center personnel face many challenges in the next six years as they turn this concept into reality.

With the decision to close the ALC, center and city officials worked closely to protect Air Force readiness while lessening the impact losing the city's largest employer would have on the San Antonio community. Some of Kelly's missions realigned to the remaining ALCs and other locations; however, most interest centered on its largest depot maintenance workloads, which the Air Force offered for public/private competition. On 4 September 1997, Warner Robins ALC, Robins AFB, Georgia, learned it had won the C-5 depot maintenance contract; and on 12 February 1999, Kelly's propulsion workload went to the Oklahoma City ALC, Tinker AFB, Oklahoma, and its commercial partner Lockheed Martin.

Meanwhile San Antonio officials determined on a proactive strategy to redevelop the base. Very quickly, the city's redevelopment organization signed leases with commercial firms for Kelly property, firms like Boeing Aircraft and Lockheed Martin. These redevelopment activities and others have brought some 5,000 jobs to Kelly. In 2001 portions of Kelly, primarily the airfield and areas to its west, would realign to Lackland AFB. The area of Kelly transferred would be called the Kelly Field Annex, and the airfield would be known as Kelly Field.



Massive displays of public support greeted Base Realignment and Closure Commission members in June 1995, but in the end, even that could not save the San Antonio Air Logistics Center.



Brooks Field



Flying Training at Brooks

In the summer of 1917, Army aviators surveyed a field south of San Antonio, Texas, as a potential site for a new airfield. The site of 873 acres was so heavily covered with mesquite and undergrowth that the Military Affairs Committee of the San Antonio Chamber of Commerce constructed a tower overlooking the land, so the inspecting officers could better view the terrain and determine the lay of the land. The irregularly shaped tract was bounded on the northeast and east by Goliad Road, with the Old Corpus Christi Road forming a portion of the boundary on the south. At the same time, just a few miles east at Kelly Field, the first cadets training for aviation service were logging flying hours aboard bi-winged Curtiss JN-4Ds or Jennies.



Brooks Field, Texas, was 1 of 27 flying fields the United States used for training pilots in World War I.



The base was named in honor of Cadet Sidney J. Brooks, Jr., who died on November 13, 1917, when his Curtiss JN-4 crashed as he attempted to land at Kelly Field.

Among them was 22-year-old San Antonio native, Sidney J. Brooks, Jr. For Cadet Brooks, however, service to country would be short lived. Within another three months, a tragic flying accident would take his life. When the United States entered the war in April 1917, Cadet Brooks was among the Americans who responded to President Woodrow Wilson's call for volunteers. He joined the Army and went to officers' training camp at Camp Funston, Leon Springs, Texas. There he volunteered for military aviator training. Upon passing the physical tests, he was transferred to the ground school at the University of Texas in Austin. Cadet Brooks completed ground school with the highest honors in the first class sent to the school. From there, he was transferred to Kelly Field for flying training.

Retired Air Force Major General Eugene Eubank was a student with Cadet Brooks at both the ground school and at Kelly. "We were all taking our primary flying, and naturally it was the subject of most of our

conversation," he said. Practically all of the 10,000-12,000 people who learned to fly during World War I trained on Jennies, according to the general. "It was built by the Curtiss people and built by the thousands." It was common for young aviators with little flying experience to wreck the planes. "There were wrecks almost every day in flying fields where lots of flying was going on. Sometimes there were fatal injuries and other times there were only minor wrecks."

On November 13, 1917, Cadet Brooks, who had completed all the flying requirements to earn his commission and wings except for a final test, became one of the early aviation casualties. During the last leg of his cross-country flight, something went wrong. From an altitude of 2,000 feet, he turned the nose down in a moderate dive and crashed at the edge of Kelly Field.

The following day in the San Antonio Express, witnesses said Cadet Brooks may have fainted, slumping forward on his steering gear. Retired Army Colonel Harry Hand, who was at the crash site, said some years later that the local newspaper made a mistake when it claimed that Cadet Brooks was taken to a hospital after the crash. "He was dead when I got to him at the crash site," Colonel Hand said. A military funeral was held on November 15, 1917. Cadet Brooks was awarded the coveted pilot's wings and a commission posthumously. (On its 70th anniversary in 1987, Brooks Air Force Base dedicated a commemorative garden in memory of Sidney J. Brooks. Within the garden is a 12-foot marble and granite monument. Retired Major General Eugene Eubank unveiled the sculpture.

A few weeks later on December 5, 1917, Colonel Henry H. "Hap" Arnold, acting chief signal officer for the Army, responded to correspondence from the San Antonio Chamber of Commerce:

> Reply to your letter of Nov. 23 to General George C. Squier, relative to naming the new aviation field at San Antonio "Brooks Field," you are informed that this office is only too glad to comply with your request, and the new aviation field located near San Antonio will be known hereafter as the Signal Corps Aviation School, Brooks Field, San Antonio, Texas.

A month earlier the chamber had signed leases with the individuals who owned the land that would become Brooks Field. One of the landowners was a man named Rudolph Keilman. Over a century ago, Mr Keilman owned a small farm and an Indian trading store near the site of the base. Whenever he and his wife, Elizabeth Ann Tice, managed to save a dollar, they would buy an acre of land. Over time they bought 3,000-4,000 acres that extended from the San Antonio River through the property that is now Brooks. The land near the river they farmed; the land at Brooks they devoted to cattle ranching.

The oldest part of Brooks and the first land sold to the government was the south section. Here Hangar 9 remains as a symbol of a bygone era. Entrance to Brooks Field was at Gate 4, now permanently locked, on the west side of the field near Berg's Mill. That was where soldiers stepped off the trains to begin their training as military aviators. The Keilmans sold the south section of Brooks to the government at $150 per acre, a nice return on their initial $1 per acre investment. Years later, just before World War II, Mrs Keilman, then a widow, sold the government land for the north section of the field.

Besides farming and ranching, the Keilman family was also in the entertainment business. Once the airfield opened, Keilman's son, Bill, built a huge dance hall across from Brooks Field on the old Corpus Christi road. Some laughed at him for building a dance hall way out in the boondocks, but Bill laughed last when his hall--The Horn Palace--turned out to be a rousing success. With a central dance floor ringed by private dining rooms, patrons could dine in private or open the door and watch a floor show or dance. At one time or another, many of the country's most popular bands played there. The Horn Palace's walls were lined with mounted animal heads, horns, and stuffed snakes and birds. Most of this collection later found its way to the Lone Star Brewery, where it resides to this day.

A chicken dinner sold for $3, a pack of cigarettes for 50 cents. When asked why he charged so much, Bill replied that he did not want to cater to anyone who could not pay the price. Indeed, the clientele often included movie stars, senators, and governors. During World War I, Bill hired girls to dance and entertain the airmen from Brooks Field, and even society girls visited the hall to do their part for the war effort.

During the war, Bill would not let male civilians into the palace because of all the fights between military and civilian customers. So the place was, for a time, fenced as though it were a part of Brooks Field.

Ground was broken for the new airfield on December 8, 1917. It remained Kelly Field #5, despite Colonel Arnold's pronoucement, until February 4, 1918, when it was formally named Brooks Field. The architect selected by the War Department was Albert Kahn, with offices in Detroit, Michigan, and the firm chosen to build the new installation was Harmon & Company of St Louis, Missouri. Work began with the extension of railroad tracks and the running of telephone lines to the new field. Kahn's plans depicted a curved hangar line in the shape of a crescent fronting an open field to the south with the remaining buildings arranged behind the line to the north. In those days, as today, an airfield was like a small, self-contained village. Besides 16 hangars, Brooks Field had a hospital, a school, a post exchange, a YMCA, an administration building, a fire station, a garage, a machine shop, a blacksmith shop, a hose house, a pump house, and a water tower. Additionally, it had barracks, dining halls, officers' quarters, an officers' mess, supply and repair facilities, a quartermaster building, a motor test facility, and buildings for the storage of gas and oil.



Major Henry C. Pratt was the first commander of Brooks Field. Along with a staff of 10, his first mission was to produce instructor pilots.

Remarkably, construction was completed in a matter of months. On January 29, 1918, the Army's chief signal officer appointed Major Henry Coner Pratt commandant of Brooks Field. Pratt had served most recently as commanding officer at Call Field near Wichita Falls, Texas. His imminent arrival was announced on February 7, along with the news that Brooks was nearly complete and had already been accepted from the contractors. No aviators had yet arrived; the population of Brooks Field still consisted mainly of two construction squadrons.

Major Pratt arrived at Brooks on February 16, 1918, and things began to round into shape in the weeks that followed. Captain Loren Pickering, who had served previously as assistant adjutant at Kelly Field, came over to organize the young cadets who would soon be arriving for advanced flying training. In March the first flyers arrived in the form of the 29th Aero Services Squadron, commanded by Captain Guy V. Head, and on the 28th of March, Major Leo A. Walton, officer in charge of flying, made the first flight from Brooks Field.

Gosport Training System

Brooks Field, in addition to the training of cadets, took on another mission--preparing Army flying officers to serve as instructor pilots, using a breakthrough method of instruction developed by the British. The Gosport method was developed by a Royal Air Force pilot, Captain R. Smith-Barry, at the Gosport flying school in Hampshire, England. Concerned by the high mortality rate among fliers, Captain Smith-Barry, in late 1917, began to teach his students using airplanes fitted with dual controls and speaking tubes developed by a fellow pilot, a Major



In this mock battle, aircraft painted with the iron cross represent the German Air Force.



On November 30, 1918, thousands came to watch an American-German sham battle at Brooks. It was the first demonstration of joint coordination of air power with other branches of the Army.

Parker. The tubes enabled instructor and student to communicate with one another while in the air. Up to that time, an instructor and student could only communicate via some very simple hand signals while airborne and could not discuss the student's performance until they had landed. The British experience indicated that the use of this new system had an immediate and positive impact on the success of flight instruction.

As introduced at Brooks Field, the Gosport method had four main components. Most obvious was that it permitted communication between instructor and student at all times by means of a speaking tube. A corollary of that fact was it allowed the instructor to correct mistakes in the air when they were made. Significantly, the Gosport method



Two aviators display the Gosport system which allowed the instructor pilot to talk with the student during pilot training in open cockpits.

emphasized the use of one instructor for a student's entire training and the acceptance of responsibility by the instructor for a student's training, including progress and problems, such as crashes or other accidents. Lastly, this new approach called for the final testing of each student in all maneuvers so that incompetency on the part of both instructors and students could be identified and eradicated.

The War Department charged the cadre at Brooks Field with the responsibility of developing Smith-Barry's system for use at other American airfields. In July 1918, three Royal Air Force officers, one of them Captain Smith-Barry, visited Brooks to assess how well things were going. They must have gone well. In September a board of Air Service officers also reviewed what was happening at Brooks, and their observations led to an announcement by the War Department that the Gosport system, as developed at Brooks Field, would be adopted at all Army flying fields in the United States.

No sooner had the Air Service adopted the Gosport method for training its aviators, when World War I came to an end. With the signing of the armistice on November 11, 1918, the demand for fliers decreased dramatically, and Brooks, like most other training facilities, was affected almost immediately. During the opening months of 1919, pilot training at Brooks Field gradually was phased out, and the advanced flying school closed its doors in May.

Balloon and Airship School

Before the month was out, Brooks Field became home for the balloon and airship school, previously located at nearby Camp John Wise. The move was apparently connected with a requirement to provide surveillance along the border between the United States and Mexico.

Balloons and airships were the mainstays of the Air Service's observation mission. They were used extensively in that role in World War I and were prized because of their ability to hover, move slowly, and stay aloft for long periods of time. The school at Brooks became one of five military facilities in the United States where instruction in balloon observation was offered. Its mission was to train pilots for lighter-than-air, hydrogen-filled airships. To carry out its mission, the school had three companies and 285 men.

Soon after the establishment of the school at Brooks, construction began on a balloon hangar in the field south of the airplane hangar line. About 1,000 feet long with a clear span of 125 feet, the 92,000 square-foot structure towered over the semicircle of smaller airplane hangars. It was built to house airships like the *Roma*, an Italian airship purchased by the Air Service at the instigation of Brigadier General Billy Mitchell. At the time, the *Roma* was the world's largest semirigid airship, measuring 410 feet long with a capacity of 1.1 million cubic feet of hydrogen. It was distinguished by its full-length external keel with built-in cabin and a box-kite arrangement of elevators and rudders.

Unfortunately, the *Roma* never was moored at the majestic hangar at Brooks Field. Not long after the Air Service purchased the airship, it concluded that its six Ansaldo engines were inadequate and replaced them with more powerful Liberty engines. On its maiden flight with the new engines, the *Roma* met with disaster on February 21, 1922. Flying out of Langley Field, Virginia, the airship had been in the air less than half an hour and was sailing along smoothly at 55 miles an hour, about 600 feet over the Army supply base at Norfolk, Virginia, when suddenly the control box at the rear of the ship broke and the nose buckled. The *Roma* plunged downward, struck a high-voltage wire, exploded, and burned. There were 11 survivors, but 13 officers, 16 enlisted men, and 5 civilians lost their lives. Investigations suggested that the extra speed which the more powerful Liberty engines gave may have caused the keel to buckle. In any case, the casualties resulted chiefly from fire, and one important outcome of the accident was the almost universal substitution of helium for hydrogen in airships.

Within a matter of months, two other airship accidents at Brooks Field hastened the shutdown of training. First, the *C-2*, an airship that was sheltered at Brooks during a flight across country, slammed into a corner of the hangar when it was caught by a crosswind as it was brought out to continue its journey. Like the *Roma*, it exploded and burned. Next, the *C-5* airship was damaged during takeoff when a stray handling guide caught a rail and ripped open the bag. Following these events, in June 1922 the lighter-



From 1919 to 1923, Brooks Field operated a balloon and airship school. With its huge airship hangar, Brooks was sometimes used as an overnight stop on cross-country flights. That was how the *C*-2 happened to be in the local area when disaster struck.



Moments after the crash the airship exploded and burned.



Crosswinds had caught the airship and slammed it into the hangar door.

than-air units transferred to Scott Field, Illinois. Soon thereafter, the Army abandoned the use of the airships altogether.

Primary Flying School

As the balloon and airship school moved out, the Air Service's primary flying school moved in--in June 1922. The move was part of a total restructuring of the Air Service triggered by the Army Reorganization Bill of 1920. In the immediate post World War II years, students had gone through primary flight training either at Carlstrom Field, Florida, or March Field, California. However, the March school closed in 1921 and Carlstrom early in 1922. With primary training at Brooks and advanced training a few miles away at Kelly, all Army flying training was concentrated in San Antonio.



Cadet officers stand before a PT-6 in front of the post headquarters. This PT-6 was 1 of only 15 that the Army procured in the early 1930s. Brooks personnel used it as a trainer.

Primary flying training would remain at Brooks until 1931 when Randolph Field opened and took on that responsibility. Between September 1922, when primary training began at Brooks, and November 1931, when the first class started at Randolph, 21 classes containing a total of 3,422 students graduated.

The first class to go through primary training at Brooks Field had 183 students. They were taught by a team of experienced instructor pilots. Each instructor was responsible for some six cadets. Students began the six-month course in the classroom, before they actually climbed into the cockpit of the Curtiss JN-4 Jenny. Most students soloed after about 10 hours in the Jenny, and then they turned their attention to such rudiments of flying as turns, crosswind landings, forced landings, and basic aerobatic maneuvers--loops, rolls, lazy eights, and the like.



Two pilots prepare for a flight at Brooks Field in a JN-4D Jenny. Thousands of flying cadets learned to fly in this aircraft.

In 1928 Brooks Field became the site of early experiments in paratroop jumps. Following a number of trial runs, an official paratroop demonstration was held on September 28, 1929. Various foreign dignitaries were present. The demonstration included two formations of nine DeHavilands and three Douglas transports. The DeHavilands circled the field at 2,000 feet and dropped 18 men, while the transports dropped 3 padded containers holding Lewis machine guns. Four minutes after the jump, the machine guns were fired from positions on the ground. In the eyes of some observers, this demonstration confirmed the practicality of tactical paratrooper warfare (which was used on many occasions in World War II).



On September 28, 1929, dignitaries from various world capitals watched as paratroopers demonstrated their skills. In this photograph, paratroopers are jumping from DeHavilands.

Not surprisingly, many aviators, who later distinguished themselves, got their start at Brooks. Among the notable alumni were Generals Nathan F. Twining, Thomas D. White, and Curtis E. LeMay, who went on to become Chiefs of Staff of the Air Force between 1953 and 1965. Brooks also had some instructors of note: Elwood Quesada, a pioneer in mid-flight refueling, and Claire Chennault, leader of the Flying Tigers. Less well known but instructors who had no less impact were Carl J. Crane, who wrote the first manual for instrument flying, and William C. Ocker, the first instructor to teach instrument flight.



William C. Ocker (left) demonstrates the Ocker Box, a device which made pilots aware of the effects of disorientation and vertigo. When the subject viewed the instruments in the box while the chair rotated, the instruments indicated correct movements even though they were at odds with his senses.

William C. Ocker

Ocker, one of the great pioneers of aviation, is known as the father of instrument flying. In fact, 1996 marked the 66th anniversary of the Army Air Corps' adoption of "blind flight" or instrument flight

instruction as advocated by Colonel Ocker. In 1912 Ocker joined the Aviation Section of the Signal Corps, where he remained for the rest of his military career. He began his career as a corporal in aviation mechanics, developing an intense interest in flying. He spent his off-duty hours lending mechanical expertise to the Curtiss Company Flying School, and they appreciated his help so much that they taught him how to fly. Ocker qualified for a pilot's license from the Aero Club of America in 1914 and, thus, became one of the elite, a flying sergeant.

Instrument flying, at first called blind flying, meant flying without being able to see the ground, either because of cloud cover, night flying, or fog. Pilots had fuel and altitude gauges on some of the earliest planes, but no instrument displayed the orientation of the aircraft. This shortfall caused many pilot deaths. One of the main problems of early aviation was the macho image of the pilots who believed their natural instincts were better guides than any instrument aids. Ocker noted that it was a sign of weakness for pilots to admit they needed instruments to fly. He recalled that expert pilots could "fly by the seat of their pants" in fine sunny weather, but not in blind flight conditions.

Flight surgeons were aware of pilot disorientation and vertigo, but they were unable to offer solutions to the problem. Ocker came up with an answer by inventing a device later called the Ocker Box. The box contained a bank and turn indicator, a compass, and a



Photographed from the base water tower, the flying cadet complex at Brooks lay just behind hangar row. This complex contained barracks and classrooms and was used in the training of World War I pilots.



Charles Lindbergh (third from left) entered cadet training at Brooks in 1924. One of his instructors, Lieutenant Claire Chennault (fourth from left), joined him and other flight personnel for this photograph.

flashlight. The entire device could be mounted on a Baranay Chair. When a subject viewed the instruments in the box while the chair rotated, the instruments indicated the correct movements even though these movements were at odds with human senses. This concept, when used on an airplane, permitted blind flying in adverse weather conditions, thus establishing the importance of instrument flying.

Ocker found it difficult to convince many older pilots of the correctness of his findings. Nevertheless, he noticed that pilots who had once been trapped in fog or blind flying conditions were enthusiastic about the new method. To prove his faith in blind flying, Ocker, with a safety observer, successfully piloted the first cross country trip with only instruments as his guide. This historic flight took place on June 24, 1930, from Brooks to Scott Field, Illinois, a trip of about 900 miles.

It was not until World War II that instrument flying was firmly established in the military. Ocker's early efforts in instrument flight instruction were duly honored when Orville Wright wrote in 1934 that Colonel Ocker "was the greatest missionary of instrument flying."

Aerial Observation Center, 1931-1939

Following the removal of the primary training school to Randolph Field, Brooks became a center of activity in tactical observation aviation. By 1931 a number of observation squadrons and a medical detachment had transferred to Brooks Field. The



At left, a soldier carries an Ithaca pump 12-gauge shotgun while guarding an AT-6 and a B-24 on the Brooks' flightline. Below, guards protect a B-17.



observation focus of Brooks became the most hotly debated aspect of the Air Corps during these years. One faction of the Air Corps considered observation to be an important auxiliary service. Another recommended more emphasis be placed on the primary services needed to secure control of the air (pursuit) and to destroy hostile targets behind enemy lines (bombardment).

By the early 1930s, proponents of bombardment had begun to make themselves heard. In 1933 the War Department concluded that an increase of combat and long-range reconnaissance planes and a corresponding decrease of observation and training aircraft was needed to rectify the perceived imbalance. By the late 1930s, most of the aerial observation mission had transferred, leaving only the 22d Observation Squadron to become the foundation of future aviation activities at Brooks. Brooks Field then entered a decade of low-profile activity that ended only when the military threats of World War II became apparent. In fact, although some minor alterations had taken place, most of the original plan for the base had been preserved so that on the eve of the second world war,

Brooks Field epitomized World War I-era planning and architecture.

World War II

The quiet that had typified the 1930s was replaced at the end of the decade by the realization that war was inevitable. By September 1939, plans were finalized to establish an advanced program of flight instruction at Brooks to relieve pressure at Kelly Field.



This World War II soldier stands ready for inspection at Brooks.

The school for combat observers at Brooks represented the continuation of the observer program that had begun with the balloon and airship school in 1919. During the early years of World War II, this program sought to train nonpilot military observers and pilot-observers. The mission of the school, which graduated approximately 50 combat observer pilots in three classes, was to prepare combat observers for aerial reconnaissance and support the ground troops by carrying cameras in stripped pursuit ships, or serving in bombing ships as a combination copilot, navigator, bombardier, photographer, radioman, and aerial gunner.

By early 1941, it was clear that this effort at observation training was not adequate to meet the needs of modern aerial units. The curriculum in general was lacking because war experience in observation had not been available for two decades, and instructors were forced to draw heavily on obsolete methods and practices. The War Department then designated Brooks as the Army Air Forces Advanced Flying School (Observation), and a new program was instituted that placed observation training under the larger umbrella of the advanced flying school. Concurrent training of pilots and observers was instigated with stipulations that only fliers were trained as advanced single-engine pilots and



Brooks conducted advanced pilot training using the B-25.

only nonpilots as observers. Although new recommendations were offered that would be appropriate to the needs of the Allies in World War II, the program was never the success envisioned. Many policymakers believed that the observation program was based on outdated World War I precepts rather than the needs of World War II. The view that nonpilot observation was of little help to the American war effort and represented something of a military anachronism resulted in the discontinuation of observation training at Brooks Field in 1943.

Although observation training at Brooks Field during the early 1940s was not a success, the advanced training program was. During most of 1940, Brooks was designated a sub-post of Kelly Field to assist in the training of military pilots. In January 1941, Brooks became an independent post again.

Now its mission was to provide flying instruction for the Air Corps advanced flying school. Advanced flying instruction was to be given for the single engine BC-1 and AT-6 planes in acrobatic, formation, cross country, instrument, and night flying. Ground school courses included signal communication, military organization, combat orders, air navigation, squadron duties of a junior officer, and code instruction.

By the end of August 1943, Brooks' flying school was renamed again. Now it was called the Army Air Forces Pilot School (Advanced 2-Engine). It immediately set forth a program of instruction designed to prepare pilots for B-25s. The program of instruction included 70 hours of flying training and 60 hours of ground training, plus 12 hours of code instruction. There were a number of problems connected with the introduction of the B-25 program. The foremost was that of obtaining sufficient planes in proper mechanical condition for flying. With the rapid shift from single- to twin-engine ships, it became necessary to retrain ground crews and pilot instructors for B-25 use.

On September 15, 1943, an additional pilot training program was inaugurated. Its mission was to teach civilian instructors Army pilot procedures and techniques. During the 16 weeks the school was in operation, students flew thousands of hours in PT-19s with no major accidents and no fatalities.

In 1943 members of the Women's Army Corps or WAC began reporting for duty at Brooks. These women took over much of the clerical work and hospital laboratory duties so that men could be released for combat duty. In addition, members of the Women's Army Corps filled positions at the field's post office and bakery.

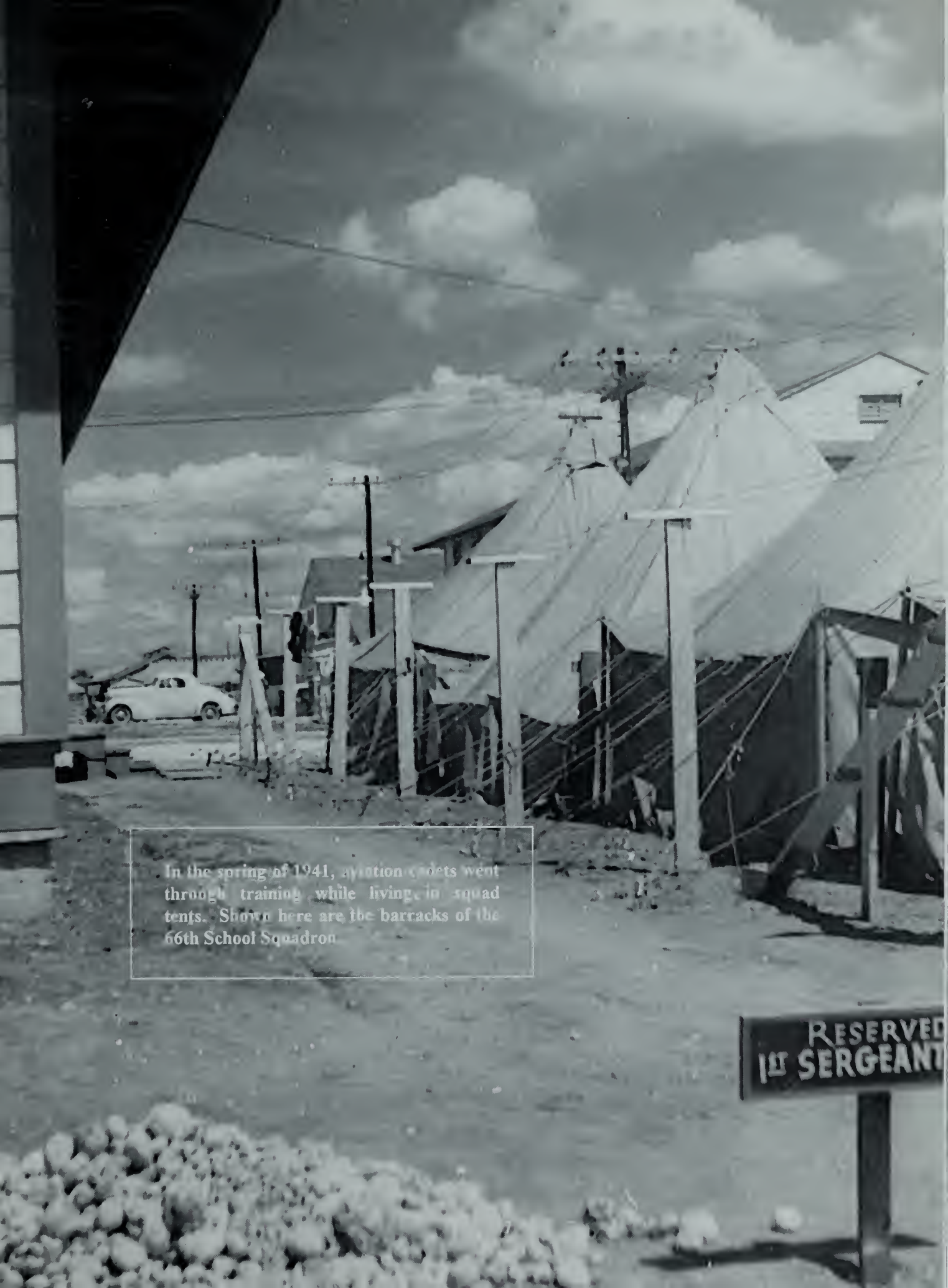
Also during this time, there were great changes on the base. By the end of the war, the size of the field as well as the number of buildings on the field had increased dramatically. If the first commanding officer at Brooks had passed through the main gate in 1944, he would have been astonished at the pace of expansion. New and improved runways had been built to meet the needs of the latest and fastest aircraft. Immense hangars had risen to house the large B-25 bombers. Substantial two-story, steam-heated barracks had been erected. Lawns had been planted, and trees, flowers, and shrubs had taken root.

Reserve Training

While pilot training at Brooks Field concluded with the end of World War II, the base took on a new mission in the 1950s. In September 1951 in the midst of the Korean War, the Air Force established a reserve training center at Brooks Air Force Base. It was commanded by Lieutenant Colonel George Keene, Jr.

Assigned to the center was the 907th Air Reserve Wing. Under the leadership of Colonel John H. Foster, a San Antonio businessman, the wing held its first unit training assembly in Hangar 16 on October 27-28, 1951. Conceived originally as a troop carrier unit, the wing did not receive its first planes until the summer of 1952. The planes were T-6 Texans, an indication of the 907th's new mission, pilot training.

Almost before it began its new mission, the 907th Air Reserve Wing was replaced by the 8707th Pilot Training Wing (Single-Engine). On the first anniversary of its activation, the 8707th had six T-6s and two C-46 Commandoes assigned. That began to change in April 1953 when the wing acquired its first five North American T-28s.



In the spring of 1941, aviation cadets went through training while living in squad tents. Shown here are the barracks of the 66th School Squadron.



After Pearl Harbor, all military bases stood watch against a surprise attack. Here, a gun crew at Brooks Field watches for incoming aircraft in an air alert drill.

In 1954 Colonel David L. "Tex" Hill, a fighter pilot who made his reputation as a member of Chennault's Flying Tigers, took over the wing's pilot training program. That summer reserve pilots racked up over 3,000 hours of flying time in T-28s as the wing demonstrated its readiness. In addition, when the Air Force began recruiting nonprior service men and feeding a limited number into reserve wings, Brooks became the scene of close-order drill for about 200 young recruits in 1954.

At year's end, Brigadier General Foster announced that pilots from the 8707th would make a cross-country training and goodwill flight to Mexico City. Some 70 reservists participated in Operation Compadre in February 1955. Upon their return, they learned the wing would convert to C-46s. At the same time, the 8707th was replaced by the 433d Troop Carrier Wing (Medium). As the members of the 433d familiarized themselves with their new aircraft, tropical storms began to brew in the Gulf of Mexico. When hurricane winds and flood waters struck Tampico, Mexico, the 433d was among the first to respond, ferrying badly needed food and medical supplies to residents of the city.

In 1956 reservists celebrated their fifth anniversary at Brooks with the arrival of another aircraft, the C-119 transport. Four years later, the 433d Troop Carrier Wing moved to Kelly. From the time the reserve first established a wing at Brooks in 1951, whatever the numerical designation, the people of San Antonio have always referred to the unit as the Alamo Wing.

Aviation Medicine

The School of Aviation Medicine



This building was the first home of the School of Aviation Medicine in San Antonio. The school moved from New York to Brooks in 1927 and remained there until 1931 when it transferred to Randolph along with the primary flying school. The School of Aviation Medicine returned to Brooks in 1959.

At the beginning of World War I, medical officers did not understand the unique medical problems of aviation. In effect, if the pilot seemed healthy and had no obvious defects of vision, coordination, or balance, then it was assumed that he could fly as easily as drive a car. Efforts to devise a medical standards test for pilots caused some colorful rumors. For example, rumor had it that the "needle test" called for a candidate for pilot training to be blindfolded while holding a needle between his thumb and forefinger. Then when the applicant least expected it, a pistol would be fired. If the applicant was so startled by the discharge that he punctured his finger and drew blood, he was disqualified because he was too excitable. Another rumor told of a test in which the applicant was hit over the head by a mallet. If he was coherent within the first 15 seconds after being struck, he was considered sufficiently resistant to concussion to make a good candidate for pilot training.

In late 1917, when Lieutenant Colonel Theodore C. Lyster became the first Chief Surgeon, Aviation Section, Signal Corps, he called for further medical research to understand aviation medical problems. Statistics showed there was an appalling death rate among flying cadets, and most of those air fatalities were not due to enemy action. Lyster noted that the British had dramatically reduced their pilot casualties by instituting a special aviation medical service. The British had found among other things that exhaustion, functional disorders, and physical unfitness caused pilot deaths.

Following the British lead, Lyster recommended that a research board be established with "discretionary powers to investigate all conditions affecting the physical efficiency of pilots to carry out experiments and tests at different flying schools, to provide suitable apparatus for the supply of oxygen," and finally, "to act as a standing organization for instruction in the physiological requirements of aviators." In addition, it was seen immediately necessary to train medical officers in aviation medicine. Physicians trained in this area would be called flight surgeons. A medical research board was established in October 1917.

Then in 1918, a Medical Research Laboratory opened at Hazelhurst Field, in Mineola, New York. Not long after the schoool moved to adjacent Mitchel Field. Instead of research, its major emphasis became education. Physicians were trained in aviation medicine. In 1922 the laboratory's name was changed to the School of Aviation Medicine.

Since flight training programs were accompanied by accidents, it seemed logical to place the School of Aviation Medicine where air training occurred. Orders directing the moving of the school from New York to Brooks Field were issued by the Secretary of War in mid-June 1926. When the school came to Brooks, it was given the big balloon hangar. In this cavernous shelter, the school was to do all that was necessary to determine flying effectiveness. In 1927 the school moved into new quarters. The building was the first permanent structure erected at Brooks.

When builders completed Randolph Field in 1931, the decision was made to relocate the School of Aviation Medicine and the primary flying school to the new facility. At a time when other air fields were receiving new programs and the fortunes of the Air Corps in general seemed to be on the rise, Brooks had lost its two most important organizations.

The school continued to train physicians in aviation medicine. However, by 1935 research in aviation medicine became increasingly centered at the newly formed Aeromedical Laboratory in Dayton, Ohio. Harry G. Armstrong helped found that laboratory and did much to develop aviation research. Later the school and laboratory would unite to help form the Aerospace Medical Division at Brooks Air Force Base.

In 1945 the School of Air Evacuation merged with the School of Aviation Medicine and began an expanded role in teaching aeromedical evacuation concepts to nurses, medical technicians, and physicians. With the establishment of the US Air Force as a separate service in 1947, the focus on aviation medicine as a unique specialty was renewed.

The time was right to establish an aeromedical center. One of the major reasons for setting up a center was that the seriously ill and injured flyers were indiscriminately scattered among various hospitals not under Air Force control. Consequently, several important studies that might have improved medical service were never carried out. By creating a center, the Air Force would have a place for the first time to study such important conditions in relation to flying accidents as flying fatigue, nervous instability, accident proneness, fear of flying, post traumatic head injuries, epileptic equivalents, and psychoneuroses.

Both the School of Aviation Medicine at Randolph AFB and the Aeromedical Laboratory at Wright-Patterson AFB, Ohio, were involved in aeromedical research. The Air Force chose Brooks as the location for its new aeromedical center because the base had plenty of empty land on which to build the center, and it was fairly close to Randolph, making the school's move easy and relatively inexpensive.

In advance of the school's transfer, officials at Brooks officially broke ground for the new facility in May 1957. Work began on the research institute, the academic building, the altitude laboratory, and the research shops (photographic laboratory, television studios, and similar services allied with research and teaching). Even with the new facilities, some of the staff offices and laboratories spilled over into 36 of the old buildings and hangars on Brooks.

The medical center was not quite the unified institution that planners had hoped to achieve. However, it contained all the necessary elements for medical research, teaching, and clinical treatment. By linking these together, the center could test, discover, and disseminate improved procedures for the care of flyers. On November 14, 1959, Senate Majority Leader Lyndon B. Johnson journeyed to Brooks to dedicate the new Aerospace Medical Center.

The mid-1960s saw the addition of several laboratory facilities. A new radiobiology laboratory allowed for research on ionizing radiation like that encountered in space. A biotelemetry laboratory supported experiments designed to transmit and receive biomedical data from remote experiment sites, and a biosystems research laboratory supported research in toxicology, pharmacology, biochemistry, and microbiology, as they related to aerospace operations. A new training facility opened, and late in the decade, the school added radiation science and laser hazards laboratories.

In the early 1970s, the center's USAF Epidemiology Laboratory moved from Lackland to Brooks.

With the emergence of the Aerospace Medical Division in 1961, the USAF School of Aerospace Medicine (renamed in 1962) together with other organizations combined aerospace medical research, education, and clinical treatment under one center

designed to study flight and its effects on the individual, as well as the various systems which support the crew member while in flight.

Today, the USAF School of Aerospace Medicine is an integral part of Brooks AFB. It is the sole Air Force training institution for the aerospace medicine program, flight nursing, environmental health (military public health), bioenvironmental engineering, and aerospace physiology. The school is internationally recognized, and it participates in training and educational exchanges with many nations.

Flight Nursing

Flight nursing began as a concept in 1930 when a civilian pilot, flying over a town that had been devastated by a tornado, envisioned moving the sick and injured to medical facilities via airplanes while nurses and technicians cared for them. Lauretta M. Schimmoler formed the Aerial Nurse Corps of America with the purpose of providing trained and qualified personnel to fulfill her vision. It took 12 years before her concept became a reality, as the medical departments of the various services and the American Red Cross would not fully endorse her idea.



A student flight nurse gains practical experience in a C-9 Nightingale trainer at Brooks' Department of Aerospace Medicine.

Two incidents in January 1942 gave impetus to the development of flight nursing as an on-going entity. The first was the mass movement of sick and wounded soldiers from the Burma-Indochina region to the United States, which prompted Brigadier General David Grant, Air Surgeon for the Army Air Corps, to call for the development of a training school for nurses and technicians. General Grant recognized the need for sick and wounded soldiers to be moved as quickly as possible with competent medical care given while they were airborne. The second came as a result of a flight from Karachi, India. Second Lieutenant Elsie Ott served as the sole flight nurse on an aircraft loaded with patients bound for Bolling Field, Washington, D.C. During the seven day it took to cross Arabia, Africa, and the southern Atlantic Ocean, Ott tended her charges with minimal assistance. Upon completion of the flight she recorded her recommendations for future flights. Many of her ideas are still a part of today's Aeromedical Evacuation System.

In May 1942, the proposal for a School of Air Evacuation was developed, and a call went out for volunteers from the Army Nurse Corps to train in this new nursing specialty. The School of Air Evacuation officially opened in October 1942 at Bowman Field, Kentucky. Two squadrons of nurses and technicians were trained, but due to the need for their expertise in North Africa and the Western Pacific area, they did not graduate. They departed Kentucky on December 25 for their respective areas of assignment. The first official graduation of flight nurses and medical technicians occurred on February 14, 1943.

Since 1942 the School of Air Evacuation has been located at Bowman Field, Kentucky; Randolph Field, Texas; Gunter Air Force Base, Alabama; and Brooks Air Force Base, Texas. More than 11,500 nurses and 7,800 technicians have been trained in the specialty of flight nursing. Additionally, 17 nations have sent nurses and technicians to learn the techniques and skills required to care for patients in the airborne environment. Three nations have developed their own programs using the USAF model.

Flight nurses and aeromedical evacuation technicians trained at Brooks provide care to the sick and wounded in a variety of aircraft: passenger, cargo, bombers, and tankers. During the Korean War, two aeromedical evacuation squadrons were the first Air Force units to be awarded the Meritorious Unit Citation. Flight nurses moved the first patients out of Vietnam in 1954, airlifting injured French soldiers to France and Algeria following the fall of Dien Bien Phu. In 1975 flight nurses and medical technicians assisted in returning the Vietnam prisoners of war to the United States. More recently in Operation Desert Storm, flight nurses and aeromedical technicians used the total force concept, integrating medical crews from active duty, reserve, and guard forces.

Flight nurses and aeromedical evacuation technicians also have given their lives in the performance of their duties. Seventeen nurses and 13 technicians were killed during World War II. Three flight nurses died during the Korean War. In Vietnam one nurse and two technicians were killed while airlifting orphans from Saigon during Operation Babylift. Also in World War II, one flight nurse became a German prisoner of war in Europe, and 13 nurses and 13 technicians were forced to utilize the skills they learned in survival training when their aircraft crash-landed in Albania, and they had to make their way to friendly forces in Italy.

Whether during periods of conflict or peace, natural disaster or individual emergency, flight nurses and aeromedical evacuation technicians have been there to ensure that people receive the best care possible. Their area of responsibility knows no boundaries.

In 1992, as part of the commemoration of the 75th anniversary of Brooks Air Force Base and the 50th birthday of flight nursing, the Brooks Heritage Foundation moved, renovated, and refurbished a World War II-era structure (Building 754) to house the Aeromedical Evacuation Annex at the Edward H. White II Memorial Museum. The heritage foundation formally presented the building to the base on November 13, 1992, the 75th anniversary of the death of Cadet Brooks.

Aeromedical Evacuation

Legend has it that the first air evacuation of injured soldiers occurred during the Franco-Prussian War when wounded men were airlifted in hot air balloons from the city of Paris. Fact or fiction, this act spurred the imagination of those involved in the development of the airplane.

The first ambulance plane was constructed in 1910 but failed to carry patients as it crashed on its maiden test flight. The first actual air evacuation of wounded military personnel took place in April 1918 at Flanders, France.

At Gerstner Field, Louisiana, in February 1918, Major Nelson Driver and Captain William Ocker converted a Jenny biplane into an air evacuation aircraft. This was done to assist in the return of pilots who crashed their planes in remote locations which were inaccessible to automobiles. The doctor could fly to the crash site, treat the pilot, and transport him back to a hospital for further care.

Between 1918 and 1930, eight different aircraft were either modified or specifically designed to be air ambulances. These aircraft could carry up to six stretcher patients and/or ambulatory patients depending upon the size and design of the aircraft. Most patients were transported on these aircraft with only the pilot in attendance. Despite this foray into the construction and utilization of airplanes for air evacuation purposes, the military authorities did not support large scale use of aircraft for the transportation of the sick and wounded, nor did they assign or develop a cadre of personnel to accompany patients when being transported.

In the 1930s some efforts were made in the civilian community to transport patients via aircraft. Due to the high cost it did not catch on, and with the advent of World War II, most aircraft were needed to support the war effort.

Hangar 9 was 1 of 16 hangars built at Brooks in 1918. A 1920s image of the hangar is at right. The center photo shows the hangar today.





Today, Hangar 9 houses the Museum of Flight Medicine. At right is one of the many exhibits on view at the museum.





The School of Air Evacuation began in May 1942 at Bowman Field, Kentucky. Its purpose was to train flight nurses. The school later moved to Randolph Field, then to Gunter Air Force Base in Alabama, and, finally, to Brooks. During World War II, American forces used the C-47 as their prime medical air evacuation aircraft. Shown here is a C-47 mockup used for training flight nurses and technicians.

The School of Air Evacuation also conceived the idea of using transport planes, which took supplies and equipment to the battle areas, to bring patients back from the front for extended care.

During World War II aeromedical evacuation crews airlifted over one million men from the front lines. General Dwight D. Eisenhower, following D-Day in Normandy, stated, "We evacuated almost everyone, 350,000 from our forward hospitals by air, and it has unquestionably saved hundreds of lives, thousands of lives."

During the Korean War, aeromedical evacuation was not initially used as ships transported wounded soldiers from Korea to Japan. However, following the airlift of 4,689 casualties over a hazardous five-day period, aeromedical evacuation became the preferred method of moving wounded soldiers from the combat area to hospitals in the rearward area.

In 1954 the Air Force introduced the first aircraft specifically designed to carry patients. The Convair C-131A Samaritan was for all intents and purposes a flying hospital. It could carry 37 ambulatory or 27 stretcher patients or any combination of both. It was primarily used to ferry patients between military hospitals in the United States.

The first jet aircraft specifically designed for aeromedical evacuation entered into service on August 10, 1968. Since that time the C-9A Nightingale has been the mainstay of peacetime aeromedical evacuation in the United States and in the Pacific and European theaters of operation. Long range transport of patients in peacetime has been accomplished using the C-141 Starlifter, while the mainstay of wartime transport has been the C-130 Hercules.

Aeromedical evacuation is not just a wartime activity. During periods of peace it is used to transport military personnel, dependents, retirees, and Department of Defense personnel assigned overseas from small clinics and hospitals to large medical centers for extended and specialty care. Brooks Air Force Base was the hub for aeromedical evacuation in the 1950s and early 1960s.

Aeromedical evacuation also conducts humanitarian missions to transport individuals from anywhere in the world to medical centers offering specialized care. The recent transport of two severely burned



The McDonnell Douglas C-9 was the first jet aircraft specifically configured for aeromedical evacuation missions. It entered service in August 1968.

Russian teenagers to Brooke Army Medical Center in San Antonio serves as a shining example of aeromedical evacuation's commitment to worldwide transport of the sick and injured in times of peace, natural disaster, or war.

The Space Years

On November 12, 1948, Brooks hosted the first panel meeting to discuss medical problems of space flight. A year later the School of Aerospace Medicine created a Department of Space Medicine.

Many of the subjects used in early pressure chamber isolation and weightlessness studies were Air Force basic trainees who volunteered. One of the first was Airman Donald R. Farrell, a finance specialist stationed at Randolph AFB. In 1958 he volunteered to test the space cabin simulator that the School of Aviation Medicine had received in 1954. Although his seven-day stay in the tiny cabin seems tame today, at the time there were many unanswered questions regarding the physical and psychological effects of long-term isolation. The significance of the feat was highlighted by the fact that Senator Lyndon Johnson was at Randolph on February 16, 1958, to greet Airman Farrell when he emerged from the chamber.

Not long after, the National Aeronautics and Space Administration (NASA) asked Brooks personnel to prepare a small life-support capsule for a Rhesus monkey (named Sam after the School of Aviation Medicine). After being trained at Brooks to do simple tasks, in 1959 Sam was lofted into a research rocket, ejected in flight, and later recovered. The purpose of the flight was to test the escape system developed by NASA for the Mercury astronauts. The success of this test and a following primate



Scientists at Brooks developed this early pressure suit for use in space. It is just one of many different projects that Brooks' personnel have worked on as a part of the United States' space program.

test confirmed the competence of aerospace medical research at Brooks.

Heavy interest in space-related programs continued through the 1960s. However, there was some slowdown in space endeavors in the 1970s following the tragic accident that took the lives of the Apollo I astronauts. One of those individuals, Edward H. White II, was born in San Antonio, Texas. His father, an Air Force general, took him aloft in an old T-8 trainer when he was 12. No one ever questioned that the boy would become a flier. He graduated from the US Military Academy at West Point in 1952, earned a Master of Science degree in Aeronautical Engineering from the University of Michigan in 1959, attended the Air Force Test Pilot School at Edwards AFB in California, and was selected as an astronaut by NASA in September 1962.



Edward H. White II lost his life in the Apollo I capsule fire on January 27, 1967.

His great moment came in 1965 when he was selected to pilot the Gemini 4 space mission, a four-day event that began on June 3. This space mission circumnavigated the earth 62 times. During the third revolution, White opened the hatch while his spacecraft was over the Indian Ocean. He stood in his seat and fired his zip gun thruster and became the first American to walk in space. Returning to earth after the successful mission, White said: "I felt so good, I didn't know whether to hop, skip, jump, or walk on my hands."

Two years later astronauts Ed White, Roger Chaffee, and Gus Grissom were preparing for a prelaunch Apollo I mission on January 27, 1967, at Cape Kennedy when an electrical spark ignited combustible materials in the pure-oxygen atmosphere of their cabin. The three perished in the fire.

(In 1970 base officials dedicated the newly renovated Hangar 9, one of sixteen original hangars built at Brooks in 1918, as a memorial to Edward H. White. The hangar is the oldest such facility in the Air Force, and it houses the Museum of Flight Medicine and other related exhibits depicting the history of Brooks Air Force Base.)

Even in the midst of this disaster, scientific research continued. Studies were conducted on nuclear survivability, decompression, sustained accelerative forces, cardiographic, and other medical data for NASA's space shuttle system, as well as for other space research.

In the early 1980s, Brooks began its military space biotechnology program, using the space shuttle to conduct medical experiments in space. Researchers at Brooks explored the need for crew protection and performance enhancement for men in military space systems. An operating location was established at the Johnson Space Center in Houston to improve coordination with NASA.

Some of the first experiments involved tests in visual functions, since astronauts had noted both

increased and decreased ability to see in space. The goal of the tests was to predict vision changes and develop methods to minimize decrements. Also in the 1980s, a short-arm centrifuge for space application was studied as a method to prevent the physiologic deconditioning of space caused by weightlessness. The current protective measures employed in the shuttle's extravehicular operations evolved directly from 20 years of joint studies by NASA and Brooks personnel on altitude decompression sickness.



An astronaut prepares for a training mission in the rotational simulator. The simulator is now on display in the Brooks museum.

Currently, Brooks personnel are working to develop medical protocols for treatment of exposure to the vacuum of space (ebullism). Beginning in 1991-1992, all astronauts were trained for G exposure at Brooks. Additionally, a crew reentry anti-G-suit was developed at Brooks, as were oxygen toxicity studies.

Within a lifetime, the age of aviation was born and brought man to the moon. These achievements were possible with the support of aerospace medicine and the technology developed at Brooks AFB.

Kennedy Visit

One of the most important events in the history of Brooks AFB and, indeed, the Aerospace Medical Division was the visit of President and Mrs. John F. Kennedy on November 21, 1963. He came to dedicate a new complex of buildings added to the USAF School of Aerospace Medicine. Tens of thousands lined the way from San Antonio International Airport, cheering as the President made his way to Brooks for the dedication. His speech that day was his last official act as President of the United States. Less than 24 hours later, he was assassinated.

Vietnam Era

The Vietnam War was an agonizing period in American history. The United States was not willing to use its full military potential to win the war, and the war's continuation made it increasingly unpopular. American military advisors were already serving in Southeast Asia when the Aerospace Medical Center became the Aerospace Medical Division in 1961. The division contributed to the war effort by sending medical teams and dental operating units to the conflict area. Although it might seem odd, the Aerospace Medical Division was involved in the early development of the gunships used in Southeast Asia. The aircraft allowed the pilot to operate rapid-fire guns that pointed out the side of the aircraft. Research for the side-firing Gatling gun was accomplished at the division's Aerospace Medical Research Laboratory in Dayton, Ohio. When the Seventh Air Force asked for additional body armor protection, the Aerospace Medical Division synthesized mission data and wound ballistics and worked with body armor technologists to develop a new flak jacket.

Air evacuation became another significant contribution of the Aerospace Medical Division. Its researchers developed advanced equipment to treat patients aboard aircraft, including therapeutic oxygen systems that provided humidity for patients with respiratory difficulties. Other inventions included digital electronic thermometers and electronic stethoscopes that could be heard over the noise of aircraft engines. The School of Aerospace Medicine aided in the development of modular air transportable hospitals. School personnel also worked with members of the Army and Navy to develop joint-service prisoner of war medical evaluation forms and procedures.



A pilot tests water survival gear developed at Brooks.

Force Modernization

At the same time the United States began disengaging itself from Vietnam, Americans were contending with the Arab oil embargo, inflation, military downsizing, and congressional budget cuts. Military money could only go to projects that addressed operational problems and that had clearly defined customers. The Aerospace Medical Division found its research narrowed from theoretical to applied. Yet, the division grew with the addition of the USAF Occupational and Environmental Health Laboratory in 1976.

Over the years, the laboratory developed the capability to analyze chemicals in virtually any substance. It gave advice concerning the actions and reactions of chemicals and responded to the site of any accidents with the potential for radiation leakage. The Aerospace Medical Division also helped the Air Force B-1 program by developing its oxygen-generating system. Missile systems were also undergoing modernization, and the division continued its support for the intercontinental ballistic missile through its research into the toxicity of missile fuels and ways of detecting leaks before they could injure launch site personnel.

Technology Transition

In addition, the Aerospace Medical Division was a single-point manager for all human-centered activities for aircrew effectiveness. Over the years, it enlarged and incorporated those laboratories whose mission was also human centered. Thus, Brooks embraced the missions of research, teaching, health care, training selection, and medical support for crew effectiveness activities. In essence, this technical organization assumed the unique position of surveillance over the field of interest that the original Medical Research Laboratory of the Army Signal Corps established and maintained during World War I and the much more complex scientific community which had developed since World War II.

In the early 1980s, the Aerospace Medical Division expanded its mission with the addition of a series of advanced engineering and development programs. Prior to this time, the division developed technology but did not control its programs past their basic research and exploratory development phases.

In addition, the division's role as the Air Force's human-centered advocate was strengthened with the assignment of the Air Force Human Resources Laboratory to Brooks in 1983.

By the early 1980s, the Aerospace Medical Division had the free world's largest concentration of human, life, and behavioral science personnel. But, there was a need to develop beyond expolatory research and provide the full spectrum for acquisition of human-centered technologies. So, an Acquisition Office was developed to act as a bridge between laboratory technology and weapon systems production. By the end of the decade, acquisition had mushroomed into a 200-plus organization responsible for advanced development and procurement of life support systems, chemical warfare defense systems, and other related systems.



A Brooks technician tests the Combat Edge positive pressure (forced air) breathing vest designed specifically for pilots of high performance aircraft by the Armstrong Aerospace Medical Laboratory.

To emphasize the importance of its acquisition identity in meeting human challenges in weapon systems development and operational support, the Aerospace Medical Division changed its name to the Human Systems Division or HSD in 1987. The same logic was used to realign the program management for the Life Support System Program Office the following year. The System Program Office's realignment emphasized the importance of human systems advocacy, independent of weapons systems. It also gave the Human Systems Division at Brooks AFB a new and significant status.

Consolidations, War, and New Challenges

The 1990s ushered in a whole new era. For several years the Department of Defense had been looking for better, leaner, and smarter cost-saving ways to do business. However, this process was intensified with the unexpected collapse of communism in Eastern Europe and the demise of the Russian empire. Americans expected a peace dividend--a reduction in defense spending. Downsizing became the buzz word, but Brooks continued to grow.

In 1991 four of its labs--the Air Force Human Resources Laboratory, the Air Force Drug Testing Laboratory, the Harry G. Armstrong Aerospace Medical Research Laboratory, and the Air Force Occupational and Environmental Health Laboratory, as well as the laboratory function of the USAF School of Aerospace Medicine--combined to became the Armstrong Laboratory, one of four super laboratories in the Air Force.

Also, the Air Force Center for Environmental Excellence was formed and located at Brooks. This organization has the monumental task of restoring closing installations to their original state and of ensuring that future installations are environmentally safe.

Operation Desert Storm

On August 2, 1990, troops from Iraq invaded neighboring Kuwait in an audacious attempt to annex the oil rich country. The United States and a coalition of 27 other countries sent in troops that eventually numbered 685,000. When diplomacy failed, action began on January 16, 1991. The war was over the following month but not before the vast superiority of USAF technology was displayed to the world.

The Brooks war effort was expressed in several ways. A major Air Force goal during Desert Storm was to minimize noncombatant casualties. The US Central Command tasked the Human Systems Division to estimate the possible noncombatant casualties following attacks on certain military targets. Along with its contractor, Brooks personnel developed a study of specific weapons, tactics, delivery platforms, rules of engagement, and casualties.

The USAF School of Aerospace Medicine's Department of Aerospace Nursing made significant contributions by recognizing problems of training prior to actual war involvement. Brooks sent two groups of flight surgeons and one decontamination team to provide medical support in the Middle East conflict. Additionally, a security police team was dispatched along with two personnel from the Occupational and Environmental Health Directorate of the Armstrong Laboratory. Brooks was prepared to aid the war effort with a Multi-Man Intermittent Cooling System, various aspects of chemical warfare defense protection, laser eye protection, pilot fatigue studies, and other related needs of personnel in combat.



During Operation Desert Shield/Desert Storm, Brooks sent two groups of flight surgeons and one decontamination team to provide medical support in this Middle East conflict. Additionally, a security police team, shown here on deployment day, also deployed in support of Desert Storm.

Desert Storm gave the Air Force the opportunity to take technology off the shelf, rush it into production, and provide for the immediate needs of troops in Saudi Arabia. The Air Force had a need, and Brooks responded.

Future Challenges

Consolidations continued in 1992 with the merging of the Air Force Systems Command and the Air Force Logistics Command

into a new organization called the Air Force Materiel Command. As a part of the new command, the Human Systems Division at Brooks again changed its name to the Human Systems Center or HSC.

Although Brooks escaped the effects of realignment and closure in 1995, base officials knew it was imperative to find new ways of increasing efficiency. One step was taken on 1 October 1998 when AFMC designated HSC as the 311th Human Systems Wing and realigned it under Aeronautical Systems Center, Wright-Patterson AFB, Ohio, which joined human factors research at Brooks with weapon system development as the Aeronautical Systems Center.

Another occurred with the announcement in January 1999 that Brooks would examine innovative ways to reduce base operating support costs. The resulting Brooks City Base Concept was a creative attempt to lower costs to the benefit of both the Air Force and the City of San Antonio. The concept would lower the Air Force's infrastructure costs, while preserving the jobs and skills performed by a highly technical work force at Brooks. With creative responses to the challenges of the twenty-first century, Brooks endeavored to ensure that human-centered research and development would continue to make the United States Air Force the home of the world's premier air and space force.

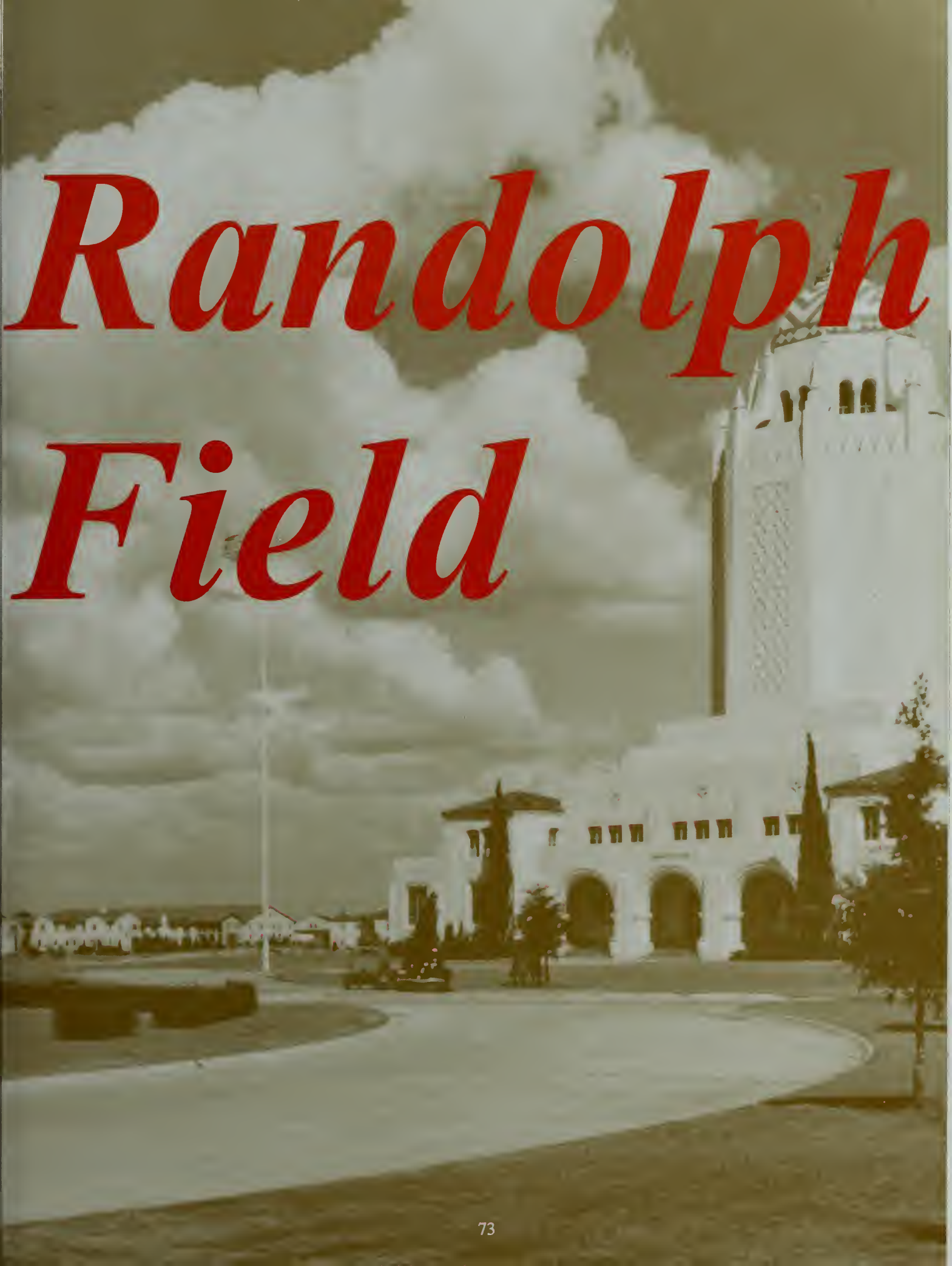


At left is the Sidney J. Brooks Memorial Park, which was dedicated in 1987.



This F-100F is the centerpiece in the General Bernard A. Schriever Heritage Park. Schriever was a former commander of Air Force Systems Command.




Randolph
Field

Origins of Randolph

Conception

Following World War I, the Army Air Service, led by such officers as Billy Mitchell, Benjamin Foulois, and "Hap" Arnold, struggled to establish an independent mission for the air arm that would warrant its separation from the Army. The audacious and outspoken Mitchell was at the center of the struggle. Mitchell's impatience and impetuous indiscretions, however, ultimately led to his court-martial and resignation in 1926.

Although the Mitchell court-martial was a stormy period for the Air Service, it had important consequences for San Antonio. The agitation of the Mitchell era prompted President Calvin Coolidge to appoint a board, headed by Dwight W. Morrow, to study the "best means of developing and applying aircraft in national defense." Although the Morrow Board's recommendations did not go nearly as far as the Air Service wanted, they did result in the Air Corps Act of 1926 which changed the name of the Army Air Service to the Army Air Corps, "thereby strengthening the conception of national aviation as an offensive, striking arm rather than an auxiliary service." More important was the authorization to carry out a five-year expansion program for the seriously under-manned Air Corps. In 1926 the Army Air Corps had only 919 officers, 8,725 enlisted men, and less than 1,000 aircraft.

Also in 1926, the Air Corps decided to make a change in its training arrangement. Instead of Kelly and Brooks operating as separate commands, officials decided to establish a single command responsible for all flying training--the Air Corps Training Center. Brigadier General Frank P. Lahm was assigned as the first commander. Since all primary flying training was given at Brooks Field at this time and all advanced training at Kelly Field, Lahm established his headquarters at Duncan Field, adjacent to Kelly, on September 1, 1926. (Duncan Field was absorbed by Kelly in the early days of World War II.) General Lahm's instructions were to coordinate and supervise flying training and, at the same time, incorporate the research and training functions of the School of Aviation Medicine, which was being transferred to Brooks Field from Hazelhurst Field, New York. Before leaving Washington, Lahm summarized his objectives regarding flying training as "bringing the primary and advanced schools closer together so as to make the transition easier."

Meanwhile, the War Department had been considering various proposals for a new training field that would best serve the needs of the expanding Air Corps. These proposals ranged from using another, existing field to supplementing the training at Brooks and Kelly to creating a brand new central flying



Shown above are Brigadier General Frank P. Lahm (center front), Commander, Air Corps Training Center, and members of his staff.

training field. Lahm concluded early on that the existing training fields were inadequate. In the first place, many of the buildings at Brooks and Kelly were hastily erected during World War I, with a life expectancy of only five years. There were also no suitable facilities for ground training, and the living quarters were inadequate. More compelling, however, was the growth of San Antonio, which was beginning to encroach upon flying training operations.

In a report to Major General Mason Patrick, Chief of the Army Air Corps, General Lahm said that the primary school was outgrowing Brooks, and he expressed the need to concentrate the Army's flying school facilities at a new field. In late 1926, General Patrick recommended such action to Congress and indicated the vicinity of San Antonio as the logical site. The government preferred San Antonio for several reasons. The primary and advanced flying schools, as well as the Air Corps Training Center, were there; the flying weather was ideal year-round; and San Antonio was well known to aviators.



This is an aerial view of Schertz, Texas, as it looked shortly after Randolph Field opened its flying training program.

Acquisition of Land

In April 1927, based on assurances from city officials that land would be made available for the new field, General Lahm appointed a board of Air Corps officers to inspect available sites. From a list of possible sites prepared by the board, Lahm selected a tract known as Calf Hill, located about nine miles east of the city on Hedwig Road (south of the present site of Woodlake Country Club). Since the designated land consisted of numerous small farms, acquiring options on the land proved to be a slow and difficult process. Although the Chamber of Commerce obtained options on over 3,000 acres, it had been unable to secure an option on the land of William Rittiman. General Lahm, considering the Rittiman tract essential for the new field, decided against Calf Hill and appointed another board of officers in October 1927 to search for new sites.

During the next 3 weeks, another 19 sites were submitted for Lahm's consideration. After the list was narrowed, for one reason or another, only one site remained--a 2,300-acre tract adjacent to the community of Schertz and the present location of Randolph AFB. Partially covered by mesquite and cacti, and partially farmland, the property consisted of many separate farms. The site was the unanimous choice of the board, but Lahm delayed announcing the selection until early December to prevent land speculation. (This would indicate that one reason for Lahm not accepting the Calf Hill site was the speculation that occurred on that land.)

General Lahm's switch from Calf Hill to the Schertz site at such a late date put the city under the gun to obtain options on the land without further

delay. Although the new site consisted of only two dozen farms, the German farmers were not anxious to sell good land. Fortunately, a local lawyer, Ernest J. Altgelt, helped to put together the options. Being German himself, Altgelt could speak the farmers' language, and he convinced them to sell at reasonable prices. By the last week of December, the Chamber of Commerce held options on all the property.

While site selection was taking place, the chamber's Military Affairs Committee had been trying to raise the money to purchase whatever site was finally chosen. The price tag for the land was estimated to be about $500,000. Unfortunately, San Antonio businessmen, displaying a remarkable amount of apathy, had done little to support the drive. In spite of General Lahm's assertion that other cities were offering free land for the new training facility, San Antonio still believed that the government would appropriate money to buy the land.

On December 1, 1927, the Chamber of Commerce sent a delegation, led by Congressman "Cactus Jack" Garner (future Vice President of the United States), to Washington to discuss the new base. When the delegates requested an appropriation, however, they learned, much to their consternation, that Congress was not in a buying mood. Not only were other cities standing in line to bid on the new facility, but the federal government also owned land in Florida and California that could be used as a site.

One of the delegates, R.J. Boyle, captured the crisis that now faced San Antonio, "Any further delay [not only] will seriously jeopardize our chances if not defeat our efforts to secure the field, [but] in the event we fail to secure the Primary Flying Field we will eventually lose the flying fields we now have." To make matters worse, Congress gave the delegation until the end of the year to make an offer of a free site. With only two weeks to put together a financial package, the delegation hastened home.

Needing to raise a great deal of money in a short period of time, the Chamber of Commerce decided to explore two funding sources. First, William Tuttle, Chairman of the Military Affairs Committee, and his Vice Chairman, Luther Clegg, established the San Antonio Airport Company to solicit contributions from local businessmen. With newspapers helping to publicize the campaign, over $100,000 was raised within the first week. Although an impressive sum, it was only a fraction of what was needed, and time was running out.

The chamber then turned to the other potential source of money, the city government. The chamber wanted the city to buy the land for the new field and then donate it to the federal government. The city, however, did not have a half million dollars in uncommitted funds. Moreover, the city attorney, Joseph Ryan, had earlier ruled that the city could not use public funds for such purposes.

Faced with this impasse, the chamber decided to seek a more reasonable opinion and asked a local judge to rule on the issue. Much to the chamber's relief, Judge James Sluder ruled that the city could issue interest bearing notes for what he rather nebulously referred to as "municipal purposes." Now the only problem was how to come up with the $500,000.

The city council devised an ingenious solution to the problem. They passed an ordinance authorizing $500,000 in city notes, which was not unusual. The unique aspect was that the notes were backed by delinquent taxes owed the city! The district attorney, however, ruled that if the city bought the land with funds voted from back taxes, taxpayers would hold a lien on the property. To get around this obstacle, the San Antonio Airport Company borrowed the money from local banks to make the purchase and presented the land to the city, which would then pay off the company's note with the money appropriated from the back taxes. On December 31st, the last day of the congressional deadline, the city informed Congress that the site was available to the Air Corps as a gift.

On August 4, 1928, the Governor of Texas, Dan Moody, signed a deed of cession, and two weeks later the Secretary of War accepted the land. The final purchase price was a little over $546,000, including legal fees and commissions, and amounted to approximately 2,350 acres, which worked out to a price of about $230 per acre. Since the San Antonio Airport Company was forced to buy entire farms rather than just the land it wanted, there were remnants of land along the outer boundary amounting to approximately 407 acres. The company sold this acreage to help pay off the outstanding debt against the land.

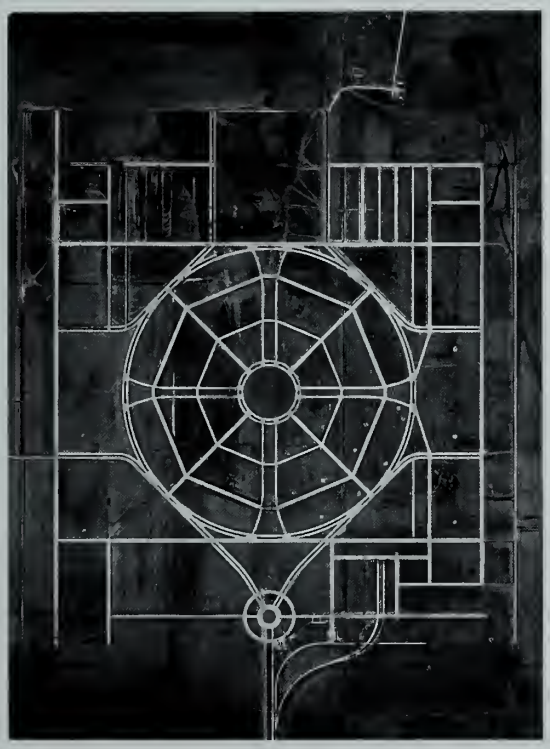
Just a few weeks after the War Department accepted the site, the field received a name. Captain William M. Randolph, a native of Austin, Texas, had entered the Army in 1916. He received his wings in 1919 following pilot training at Kelly. After a tour in the Canal Zone, he returned to Kelly in 1927 as Adjutant of the advanced flying school. In 1928 he was selected to a committee, along with several other officers, to recommend a suitable name for the new training field. On February 17, 1928, Captain Randolph was killed when his AT-4 crashed on takeoff from Gorman Field, Texas. A member of the committee thought the field should be named after Randolph, and on September 27, 1928, the War Department officially approved the name.



The War Department honored a native Texan, Captain William M. Randolph, when it selected Randolph Field as the name of the new flying installation under construction just outside San Antonio.

Design

The design of Randolph Field, oddly enough, had been drawn up before a site was selected for the new airfield. In fact, a site was selected to fit the design, rather than the reverse, saving a full year in the start of construction. The layout of Randolph was unique and revolutionary for the times. The concept was the idea of First Lieutenant Harold L. Clark. Lieutenant Clark had enlisted in the Army during World War I and volunteered for flying service. He completed flying training in 1918 and served as a flying and gunnery instructor. In early 1927, while stationed at Wright Field, Ohio, Clark requested a transfer to Kelly Field. Because he had requested a transfer, Clark arrived at Kelly in the doghouse and was assigned as dispatch officer in the motor pool.



By October 1929, workers had laid out the major streets that would make up the Army Air Corps' newest "Air City," Randolph Field.

After arriving in San Antonio, Clark began reading articles in the local press about the formation of a consolidated flying training center. Having some training as an architect prior to his military service, Clark viewed the proposed training center as an architectural problem. For his own amusement, he began to make sketches on the backs of dispatch sheets. As sketch after sketch followed, Lieutenant Clark began to build his entire layout along revolutionary lines. Clark set out to avoid what he viewed as a horrible layout at Kelly where, because of the prevailing winds, all landings had to be made over the hangars. His sketches evolved into what was termed an "Air City."

The plan was unique in that the building area was centered on the field, with streets laid concentrically, while the aircraft ramps and runways were located on three sides of the field, thus forming a square perimeter framing the circular layout of the interior section of the field. The intention was to divide the circle into four quadrants, each given over to a distinct function; three accommodating primary, basic, and advanced flying schools and the fourth the shop and service area.

Borrowing from the local architecture of the area, Clark designed his air city in the popular Spanish Mission style. With his final drawings in hand, Clark went to see General Lahm's executive officer and asked him if the board of officers considering sites for the airfield would like to look over his sketches. The executive jumped up and told Clark, "Come on, the board is meeting right now in General Lahm's office. I want him to see this." General Lahm liked the plan immediately, and on December 5, 1927, Clark was



detailed on special duty to Lahm's office to devote full time to developing his design.

The revolutionary design became the subject of a stormy controversy between the Quartermaster General and the Chief of the Air Corps. The Quartermaster General wanted to duplicate the design of March Field, California, at Randolph. March Field had a triangular building area at the entrance to the field, with the remaining acreage left for flying purposes. Clark believed this design would work well for a single unit field, but would be too costly and inefficient for a three- or four-unit operation.

The dispute came to a head on October 17, 1928, in the office of the Secretary of War, Dwight Davis. In addition to Davis, among those present were Major General James F. Fechet, Chief of the Air Corps; Major General C. F. Cheatham, Quartermaster General; and Lieutenant Clark. General Fechet argued



that since Randolph would be used for flying training, the Air Corps should have a say in its design. General Cheatham was angry because he felt that it was the quartermaster's job to design the airfield. Finally, Secretary Davis decided that "the Quartermaster General would build Randolph the way the Chief of the Air Corps wants it." The Air Corps considered this a historic occasion because it was one of the few times in its short history that it was permitted a voice in the determination of its own requirements.

Preconstruction

Once the German farmers had harvested their crops, no time was lost in preparing the site for the largest Army construction project since the Panama Canal. After the owners moved out, 17 farm houses were leveled, fences torn down, and the farm land cleared. On October 11, 1928, work began on clearing the entire tract. A rather spectacular method was used to clear some 180 acres of timber. A heavy 500-foot cable was fastened to the largest tree in the area, and a 10-ton tractor was hooked to the other end of the cable. The tractor then traveled in a circle at the end of the cable, pulling down all trees inside the circle.

After clearing the land, the other major preconstruction projects were installing underground communications and power lines, drilling for water, and laying out the roads. Small cadres of skilled enlisted men from Brooks and Kelly were assigned to Randolph to assist in the projects. On August 12, 1929, Captain Earl H. DeFord arrived from Kelly to become the first commanding officer of Randolph Field. At that time the field consisted of a "few construction shacks, a Chinese restaurant, and the flag pole with a flag."

The communications and power lines were all installed in underground conduits to eliminate the use of above ground wires. Even the railway track which ran parallel to the entrance highway was laid nearly flush with the ground so as not to present an obstruction to an aircraft making a forced landing.

One of the most important projects begun during the preliminary construction period was that of obtaining a reliable water supply. A total of nine wells were drilled, but only three produced potable water. These wells were sunk to a depth of 600 to 700 feet to the Edwards Underground Aquifer, the same strata which feeds the wells in San Antonio. At the height of World War II training, another well was drilled, to assure an adequate water supply for the field.

Since the arrangement of the entire field was to be established by the road pattern, the foundation for the elaborate circular network was laid before any construction began. By the end of 1929, the road pattern had been established and, when completed, consisted of 31 miles of roadway at a cost of $425,000. (For anyone who has been lost on Randolph's roads, it must come as some sort of satisfaction that General Clark, in commenting on the base he designed, told a Randolph historian, "You know, my dear, I love this place, but every time I come out here I get lost.")

Construction

With these basic installations completed, the actual above-ground construction at Randolph began in earnest. The Construction Quartermaster of San Antonio, Captain Arthur W. Parker, was put in charge of the construction. On October 18, 1929, the first contract of $1.28 million was awarded to Murch Brothers Construction Company of St Louis for the construction of the Quartermaster and Air Corps warehouses (presently Buildings 220 and 224) and six enlisted barracks.

About this time construction of the first quarters for officers got under way. Although adhering to a basic floor plan, variety was achieved by positioning wings to different sides of the quarters, by interspersing one- and two-story structures, by varying slightly the outer decoration, and by tinting the stucco exteriors in slightly different shades. Construction costs for field grade officers quarters were set at $13,500, while company grade quarters cost $12,000. Construction of the commanding general's quarters, designed by local architect Herbert F. Greene, did not begin until April/May 1931 and was completed on November 5, 1931, at a cost of approximately $25,000.

These quarters were built of hollow clay tile and stucco construction with Spanish Mission-influenced red tile roofs. The Quartermaster General wanted to use reinforced concrete for the quarters, but Lieutenant Clark convinced them to use hollow clay tile because it was a basic industry in the local area.

It is interesting to note that practically all of the officers' quarters leaked in wet weather. The Hot-Kold heating plants in many residences proved unsatisfactory. The units were noisy, and the fact that hot air outlets were placed near the ceiling led to inadequate and unequal heat distribution. Within a few years after the quarters were completed, gas-steam radiators were installed to provide additional heat, cracks and apertures were caulked, interiors were replastered when necessary, and exterior walls were covered with waterproof paint. The Works Progress Administration did much of the repair and maintenance work in the 1930s. Otherwise, because of the Great Depression, many of the repairs could not have been done.

The cadet area at the south end of the field was composed of four structures: the academic building, the administration building, and two cadet barracks. The academic building (presently Building 900) was used to provide ground school instruction and contained offices, classrooms, a technical library, and a well-equipped radio room. The administration building (presently Building 905) was built at a cost of $154,000 and contained administrative offices, a Post Exchange (PX) branch, a barber shop, a gym, a bowling alley, and a large cadet dining hall. Each of the cadet barracks (presently Buildings 901 and 902) was constructed for $132,000 and contained 53 bedrooms designed to accommodate two cadets each. Behind each barracks was a broad piece of asphalt pavement or ramp which the cadets used to walk off demerits--hence the term "walking the ramp."

With its carefully preserved architecture and luxuriant landscaping, Randolph is known as "The Showplace of the Air Force." Few people are aware, however, of the meticulous planning that went into the landscaping. When appropriating funds for the construction of Randolph, Congress also allocated money for a 20-acre nursery and several greenhouses. Captain Norfleet G. Bone took charge of the nursery and the landscaping project. To augment the plants supplied by the greenhouse, Bone collected a variety of cacti, yuccas, and desert plants from New Mexico and west Texas and had them flown to Randolph. Live Oak and Spanish Oak trees came by the truckload from Leon Springs.



Randolph Field was dedicated on June 20, 1930, before a crowd of about 15,000. Highlights of the ceremony included the passing in review of 233 aircraft and the raising of the flag by the widow of Captain William M. Randolph.

The local chapter of the Daughters of the American Revolution are responsible for the stately Live Oaks that line the present day Washington Circle, Military Plaza, North Park, and South Park. During the George Washington bicentennial year of 1932, the chapter presented 120 trees to Randolph.

Dedication

Randolph Field was dedicated on June 20, 1930, when construction was only about half completed. Many high ranking military and civilian officials and a

crowd of over 15,000 people attended the formal ceremony. Mayor C.M. Chambers of San Antonio made the official presentation of Randolph Field to General Fechet, Chief of the Air Corps. Escorted by General Lahm, Mrs William M. Randolph, widow of Captain Randolph, raised the first flag over the installation. The program concluded with the spectacular sight of 233 planes from Brooks and Kelly Fields, Fort Crockett (Galveston, Texas), and Fort Sill, Oklahoma, passing overhead in what was described as "the largest assembly of aircraft in the world."

A month after the dedication, General Lahm, who came to be known as "The Father of Randolph Field," turned over command of the Air Corps Training Center to Brigadier General Charles H. Danforth. General Lahm's place in Randolph's history was guaranteed.

By the autumn of 1931, Randolph was ready for business. On October 1, the Air Corps Training Center moved its headquarters from Duncan Field to Randolph. The flying school at Brooks Field transferred to Randolph on October 20, while the school at March Field transferred on October 25. To transfer the training aircraft from March to Randolph, the Air Corps Training Center designated 19 officer pilots to act as flight leaders for the cadets to fly the aircraft to Randolph. The officers and 92 flying cadets ferried a total of 111 training aircraft to Randolph.

On October 25, 1931, with 162 officers and 1,432 enlisted men attached to 13 organizations, Randolph Field came into official existence as the headquarters for the Air Corps Training Center. The first pilot training class, composed of 210 cadets and 99 student officers, began training on November 2, 1931.

Flying Cadets at Randolph

Most of the students--about three out of four at the time Randolph opened--came directly from civilian life. The rest were mostly recent West Point graduates or line officers transferring to the Air Corps, along with small numbers of noncommissioned officers and Reserve and National Guard officers. When it came to flying, they all received the same training. For those who arrived at Randolph directly from civilian life, there was more. As flying cadets, they entered a demanding program that included a heavy dose of military training and led to a commission in the Army Air Corps, as well as their pilot's wings. The term flying cadet was in use throughout the 1930s. On July 3, 1941, flying cadets became aviation cadets. To become a flying cadet, an applicant had to be an unmarried, male US citizen between the ages of 20-27 with at least two years of college. If he did not have the required college experience, he had to be able to pass a test examining his knowledge of United States history, general history, English grammar and composition, geography, mathematics, and physics. Needless to say, he also had to be in excellent health and sound physical condition.

With the opening of the Primary Flying School at Randolph, San Antonio once again became the home of all Air Corps pilot training. Actually, the term primary was a misnomer inasmuch as the school at Randolph conducted both the primary and basic phases of instruction before the students moved across town to Kelly Field for advanced training. Each phase lasted about four months. Thus, student pilots spent approximately eight months at Randolph learning the fundamentals of flying and then spent four months at Kelly where they made the transition to service aircraft and received more specialized training.

From the first day they set foot on Randolph, flying cadets were put through their paces. In the words of one of the earliest graduates:

> I was in the second class to begin training at Randolph Field, the "West Point of the Air." No sooner had I arrived at the gates than the reason of that title was made clear to me. As well as learning to fly, there were other things to be learned and the first of these was discipline. For the first two weeks we did close order drill for fifty minutes out of every hour, with a ten minute rest period, for ten hours a day. . . .
>
> We were issued our clothing, which had to be folded a certain way, placed in a particular spot in our lockers and kept in order at all times. Our tailor-made uniforms had to be kept spotless and creased.
>
> . . . We had to keep our bunks made and our rooms spotless at all times. The brass buckles on our uniforms must shine like burnished





Cadets report for training (top), visit the tailor shop for alterations (center), and depart supply carrying their initial equipment.



gold at all times. For this first two weeks' period we were not permitted to leave the cadet area.

For the first four months we were under the guidance and jurisdiction of the "Upper-Class," who were the cadets in the second or basic training stage. To them, we were ignorant "Dodos" [a species of bird that is unable to fly]. Their wishes were commands. If they wished anything--a poem to be memorized or dramatized--a submissive "Dodo" was called upon.

The upper-class were highly respected, even worshipped--They had successfully survived the hazardous "washing out" period of training! We were allowed only three answers: "Yes, Sir!" "No, Sir!" and "No excuse, Sir!" We were served after they had had the choice morsels from the platters, and we in turn acted as Jesters for their amusement at the table.



Besides following the wishes of their upper classmen and attending to military and flying training requirements, cadets also had to prepare for routine quarters inspection.

The amusement of the upper class was not confined to the dinner table. A dodo could not walk in the cadet area; he had to trot. He also had to bank all his turns by extending his arms with the arm on the outside of the turn higher and the arm in the direction of the turn lower. A dodo had to wear his goggles around his neck until he had soloed and only then could he wear them on his forehead. On mornings when grapefruit was on the menu, he often had to wear them in flying position, not for protection but mainly to remind him of the limitation goggles imposed on his range of vision. On a lighter note, whenever a dodo passed a mail box he came to a stop, took off his hat, and bowed low. The mail box received this honor because it was the place they deposited mail for the girl back home. He also had to commit to memory and be able to recite at a moment's notice such things as the pre-takeoff checklist or the name and location of all Air Corps stations.

After two weeks of intensive military training, cadets fell into a fairly routine schedule split about evenly between ground training and flying training. In primary training, students studied all manner of subjects in ground school: the theory of flight, the art of navigation, meteorology, airplane maintenance, the workings of internal combustion engines, gunnery, and radio code. These subjects remained the staples of the curriculum with little change in the hours afforded each subject from the opening of Randolph until the early days of World War II. Cadets received 75 hours of instruction on airplane engines in 1931 and 72 hours in 1939; in airplane maintenance they received 25 hours in 1931 and 28 hours in 1939; and so it went. In all, cadets received 308 hours of ground training in 1931 and 341 hours in 1939, with most of the increase due to the addition of 20 hours of mathematics and 10 hours of military law.

It was much the same story in the cockpit as in the classroom. The curriculum remained remarkably stable during the 1930s. There were significant changes, however, in the airplanes used in both the primary and basic phases of instruction. A flying cadet in 1931 began his training in a PT-3, a Consolidated biplane with a cruising speed of 81 miles



Along with flying, cadets learned about the weather.

per hour and a maximum speed of 102 miles per hour. When he completed primary school and moved into basic, he also moved into a different aircraft, the Douglas BT-2, a biplane capable of cruising at 113 miles per hour and achieving a maximum speed of 133.

The Army Air Corps began buying a new primary trainer in 1936, the Stearman PT-13 Kaydet. Another biplane, it had a sleeker, less angular appearance than the PT-3 and could cruise at 96 miles per hour and reach a top speed of 135. That same year Randolph also sported two new basic trainers. The first of these, the Seversky BT-8, was a squat, all-metal monoplane with a fixed, faired landing gear. It had the distinction of being the first Air Corps basic trainer built expressly for that purpose and had



The Army Air Corps gained a new primary trainer, the PT-13, in 1936.



The Army Air Corps adopted the BT-9 as its standard basic trainer in late 1935 and used it as such throughout World War II.

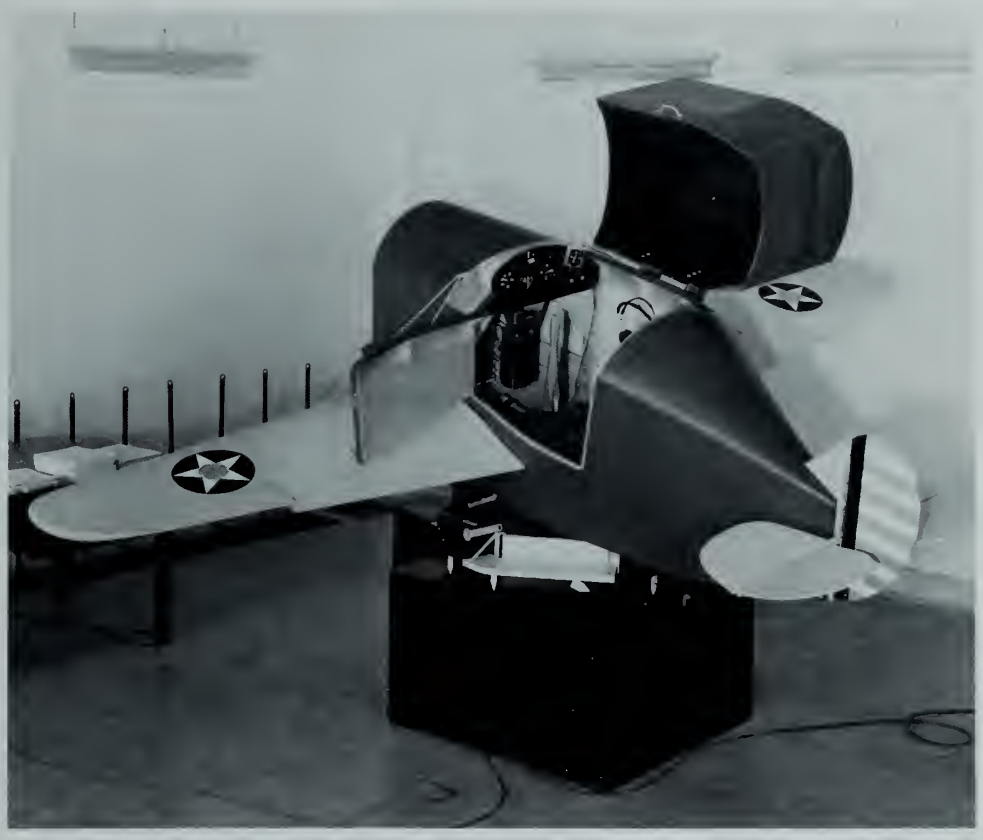
a top speed of 175 miles per hour. Flying cadets could also receive training in the North American BT-9, a leaner metal monoplane with retractable landing gear, it could cruise at 147 miles per hour and reach a maximum speed of 170. The BT-9 was the closest the Air Corps had yet come to a trainer that was similar to tactical aircraft.

Typically, a cadet spent about eight hours in the PT-3 learning the rudiments of flying before the instructor pilot turned him loose to solo. During that brief period, he learned how to operate the controls and had a chance to practice straight and level flying and shallow turns before the pace quickened to include climbs, glides, stalls, taxiing, take-offs, landings, forced landings, and spins. Once the instructor was satisfied the student could safely fly the plane, the two moved on to increasingly complicated maneuvers: 180-degree turns, 360-degree turns, cross-wind landings, lazy eights, eights on pylons, loops, rolls, strange field landings, and (almost every day) forced landings. Making forced landings was only a little less forgiving than parachuting out of an airplane. If it wasn't done right, there might not be another chance. Primary training in the early 1930s amounted to 61 flying hours, 31 hours of dual instruction, and 30 hours of solo time.

When a flying cadet progressed to basic training, he began learning to fly all over again with a new

more complex airplane. It took about five hours of dual instruction before the instructor pilot cleared a cadet to fly solo. One cadet described the experience this way:

> Gadgets, millions of them -- altimeters, rate of climb indicators, bank indicators, air pressure, R.P.M. indicator, fuel gauges, safety belt . . . each demanding attention. . . . Now the take off, throttle forward -- a bounce, another and now up, up--just you and the plane -- and below -- well below is the world with all its earth-bound mortals.... Down now for that landing. Cut the motor--establish that glide--stabilizer up, now a gliding turn and flaps--more flaps. Down steeply towards the ground--down--down--back on that stick, back, back--a bump and Randolph Field settles under the wheels.



As is still true today, not enough operational aircraft were available to provide all the training needed. In the 1930s and 1940s, instructors used the Link Trainer to provide instrument training.

Early on, the basic training program of instruction provided 90 flying hours for the student pilots. By 1939 a cadet might spend 103 hours in the cockpit to complete the course, but the changes reflected shifts in emphasis rather than a substantive shift in training philosophy. In the basic phase, cadets tried to improve their elementary flying skills. Also, they were introduced to some of the more complex facets of flying to include cross-country flying, instrument flying, formation flying, and night flying.

An apprehensive but candid cadet had this to say about night flying:

> You drop swiftly into the abyss below. Now you are at right angles to the field. You have cut your gun, set the stabilizer, and the critical moment is approaching. . . . Here comes the light! The ground tilts beneath. Every nerve in your body is on end. 'Ease it back, ease it back slowly,' you hear on the ear phones and it rings in your mind. The ship is ready to touch now. She is settling, settling, settling. . . . How high are you! After what feels like an eternity you hit, bounce slightly, and roll out of the light into the dark beyond.

Upon completing four months of primary training and four months of basic training at Randolph, cadets proceeded to Kelly Field where they completed the program with four months of advanced training in the type of aircraft they might expect to fly once they earned their commission and their wings. Thus, cadets spent their last four months receiving specialized

training in either pursuit, bombardment, attack, or observation aircraft. That was how the program was structured until the drumbeat of war began to resonate around the world in the late 1930s.



Cadets prepare to leave their BT-9s behind and move on to Kelly Field for advanced training.

Expansion

The first sign of change came in August 1937 when Brigadier General Henry H. Arnold, then Acting Chief of the Air Corps, announced an expansion of the size of classes at the Air Corps Training Center at Randolph Field to 344 students a class. At the time, there were but two cadet barracks that could house 212 cadets. To handle primary classes of 344 students, school officials decided they could, on a temporary basis, put four to a room. To cope with the larger classes in the long run, authorities approved the construction of two additional permanent barracks in the cadet area. They were completed in 1939, in time for an expansion of major proportions.

Contract Primary Schools

Early in 1939, the War Department announced it intended to beef up the Air Corps by over 4,500 pilots in the next two years, more than double the 2,200 pilots then on active duty. To pull that off, the Air Corps decided to conduct primary training at civilian contract schools and have Randolph concentrate strictly on basic flying training. A board of officers appointed by General Arnold recommended nine civilian flying schools to initiate the new program. The civilian schools began training primary students in July 1939. In line with that plan, the last class of primary students graduated on August 25, 1939, and Randolph moved full tilt into basic training a month later. New classes were slated to enter every six weeks. With that, the school at Randolph became the Air Corps Basic Flying School. In the months leading up to the inauguration of primary training at contract schools, the staff at Randolph was extraordinarily busy. To standardize the training provided by the contract primary schools, Randolph instructor pilots set up an intensive two-week course for their civilian counterparts. Since the students were already experienced flyers, the purpose of the course was not to teach anyone to fly but to acquaint them with the methods of instruction developed at Randolph and with the peculiarities of Air Corps training equipment. At the end of the course, each student ferried a primary training airplane back to his field. Looking back, this marked the beginning of a long-standing association between Randolph and pilot instructor training.

In addition to furnishing the planes, Randolph Field also furnished a cadre of several officers and sergeants at each location to supervise the civilian primary schools and oversee the military training program. To accelerate the production of pilots, the Air Corps cut the training time in each phase from 16 to 12 weeks. By bringing in a new class every six

weeks in both the primary and basic phases, the Air Corps was able to continue the military training side of the flying cadet program which was based on the interplay between upperclassmen and lowerclassmen.

Before the year was out, the goal of an additional 4,500 pilots within two years had changed to training 7,000 pilots a year. In a matter of months, the goal was increased to 12,000 pilots a year. To cope with those kinds of mushrooming numbers, the Air Corps had to expand its training base almost overnight. One of the first things the Air Corps did was contract in June 1940 for nine more civilian flying schools to conduct primary training. But increasing the number of primary schools was not enough. Randolph could no longer handle all the basic training nor could Kelly continue to offer advanced training for all the student pilots moving through the system. Moreover, with the primary schools spread all across the country, it was no longer practical for the Air Corps Training Center at Randolph to administer the entire flying training program.



In 1942 Lieutenant Colonel (later General) Gabriel P. Disosway served as Director of Training at Randolph.

New Training Centers

The Air Corps, therefore, opened two new training centers in July 1940: one at Maxwell Field in Montgomery, Alabama, and one at Moffett Field in Sunnyvale, California. The center at Maxwell was called the Southeast Air Corps Training Center, that at Moffett was named the West Coast Air Corps Training Center, and the one at Randolph became the Gulf Coast Air Corps Training Center.

At about the same time, the Air Corps began construction of another basic school at San Angelo, Texas, to take care of the overflow from Randolph. By January 1941, the Air Corps had shifted some of Kelly's heavy advanced training load to Brooks Field. Just a few months later it set up additional advanced training schools at Ellington Field and Foster Field, both in Texas. Kelly, Brooks, and Ellington all became advanced twin-engine schools, and Foster Field was a single-engine school.

Nothing was set in concrete in those days. Indeed, before the concrete on some of the new airfields could dry, it seemed the War Department was announcing new pilot production goals--first 30,000, then 50,000, next 70,000, and eventually 93,000. Each new goal triggered a corresponding expansion in the number of contract primary schools, as well as the construction of additional fields to house basic and advanced training. The constantly ballooning pilot production goals created a heavy demand for qualified instructor pilots, a demand the training centers were hard pressed to meet.

Worth mentioning is an innovative approach tried by the Gulf Coast Training Center. In September 1942, it hand-picked 400 cadets for a program especially designed to graduate students as service pilots, qualified to serve as instructor pilots but not prepared for assignment to combat units. The idea was simple--cut out advanced training and send students through only primary and basic training. That is what happened to the 400 members of Class 42-X at Randolph. They attended a specially tailored course that compressed the nine-week primary course and the nine-week basic course into a combined course that lasted but thirteen and a half weeks. Somehow, Lieutenant Colonel Gabriel Disosway, Director of Training at the Gulf Coast Training Center, managed to squeeze more flying time and classroom hours into the abbreviated course than students normally received.

So impressed were the cadets, that they dedicated their classbook to him. "A departure from tried methods of training is always beset with difficulties. The resourcefulness and energy that is a part of his personality is the key to the success of the experimental project in which we have been privileged to participate." (The cadets saw something in his



A student pilot approaches his assigned AT-6 on the ramp at Randolph. Note the unique nose art which included a picture of the "Taj."

makeup that Air Force leaders also observed. Years later with four stars on his shoulders, General Disosway served as Commander, Tactical Air Command.)

Indeed, the experiment did seem to be a success. Of the 400 students who started the program, 235 could call themselves graduates. That was a higher number than normally made it through the primary and basic stages together. The cadets mainly flew the Vultee BT-13 and North American BT-14, both relatively new, low wing monoplanes with enclosed cockpits and workhorses in the basic stage at that time. They also got a few flying hours in the North American AT-6, an advanced trainer. Colonel Disosway observed the performance of Class 42-X and concluded that it was feasible to begin flying training with airplanes more advanced than those used in primary training. His observations led him to recommend a different way of doing things.

Disosway suggested two parallel tracks for training aviation cadets (changed from flying cadets on July 3, 1941, to give the cadets the same status as their counterparts in the Navy and Marines). His proposal called for aviation cadets in preflight school to be divided into two groups, fighter pilot trainees and multi-motor trainees. The fighter group would pursue a course lasting 22 1/2 weeks; cadets would start in basic trainers and move on to advanced trainers and tactical fighter planes. The course for the multi-engine group would be the same length, but the cadets would start with nine weeks in primary trainers, skip the basic stage, and go directly to multi-engine advanced schools. Those who washed out of the fighter track would be reassigned to the multi-engine track; the reverse was not true. Whatever the reason, the Army Air Forces never followed up on the proposal.

Central Instructors School

In any event, the problem of securing sufficient qualified instructors remained. At first, each of the regional training centers set up their own schools to train instructors. In the summer of 1942, Kelly Field opened a school to provide standardized training for those who would serve as instructors at bases operated by the Gulf Coast Air Forces Training Center, a new designation occasioned by the creation of the Army Air Forces Flying Training Command earlier in the year to provide direction for the three regional training centers. Flying Training Command established its headquarters in Fort Worth, Texas. The school at Kelly graduated its last instructor pilots in February 1943, and the following month the Army Air Forces closed the basic flying school (and the aviation cadet program) at Randolph and replaced it with the Central Instructors School to train instructors for all Flying Training Command units.

Anyone slated to become a primary, basic, advanced single-engine, or advanced twin-engine instructor went through the school at Randolph Field. So, too, did those selected to serve as ground school instructors, as well as officers scheduled for duty as



Early on, the Central Instructors School established a Twin Engine Group to take newly graduated pilots and train them to be twin-engine instructors. The first graduates of that program are shown above.

commandant of cadets or as tactical officers. With a maximum student capacity of 1,640 at any one time, the new consolidated school usually hosted a mix of 1,200 flying instructors and 440 ground school instructors and tactical officers. Between March 1943 and April 1945, when it moved to Waco Field, Texas, the Central Instructors School produced 15,396 graduates. The school returned to Randolph in November 1945, and for much of the next five decades, training instructor pilots was a central part of the base's mission.

That was not to say Randolph did not become home for a number of other missions over the years. For instance, in April 1945 when the Central Instructors School moved to Waco, the Army Air Forces pilot school opened its doors at Randolph to provide transition training for B-29 bomber pilots, copilots, and engineers. In a few months. the doors would be shut. With the end of hostilities in the Pacific came the cessation of the use of B-29s for training purposes. It happened very abruptly in August 1945.

Pilot Training Returns

Randolph Field did not lie fallow for long. In the fall of 1945, Army Air Forces planners looked to reestablish Randolph as the "West Point of the Air" when it came to conducting both primary and basic pilot training. In the interim, the Army Air Forces Pilot Instructors School returned to Randolph in November 1945 for a brief stay before it transferred to Barksdale Field, Louisiana, in March 1946. More significantly, Randolph welcomed the return to the base of primary pilot training just a day after Christmas in 1945. In those days, the Army conducted primary and basic training at Goodfellow Field, Texas, for whites and at Tuskeegee Army Air Field, Alabama, for blacks. To get primary training started again at Randolph, Army Air Forces transferred half of the white student population from Goodfellow to Randolph. The last basic class had



For a short period of time, Randolph provided transition training for B-29 pilots.

graduated from Goodfellow on September 8, 1945, and plans were formulated to commence basic pilot training at Randolph on February 1, 1946.

That had to be postponed, however, when the Army Air Forces found itself desperately short of personnel. In the rush to return to normalcy at the end of the war, so many enlisted maintenance personnel separated from the service that it became necessary first to reduce and then to freeze training activities. On January 28, 1946, a board recommended that all pilot training be suspended. The next day Army Air Forces Flying Training Command postponed the graduation dates of all pilot classes for 7 1/2 weeks and announced it would accept no more entries into pilot training until March 26, 1946, which was subsequently postponed until May. As a result, basic training was practically nonexistent during the first half of 1946. Randolph Field had only one class in training during this period, and that class had begun basic pilot training at Perrin Field, Texas, in October 1945 and transferred to Randolph in March 1946. It graduated in May 1946, 28 students strong.

Randolph continued to focus on its pilot training mission until the early days of the Korean War. It became an air force base in January 1948, shortly after the Air Force became a separate service in September 1947, but little else changed in the last half of the 1940s. The Air Force did reshape its pilot training program in March 1948, but the effects on Randolph were hard to see. The base simply substituted a single eight-month-long basic course for two separate four-month phases--primary and basic. Randolph continued to use the AT-6 Texan throughout the basic course, and it continued to train its own instructor pilots.

Combat Crew Training

That all changed with the outbreak of the Korean War in June 1950. In a matter of months, Randolph was once again in the B-29 training business. In September 1950 Craig AFB, Alabama, took over Randolph's pilot instructor training mission, as Randolph geared up to provide combat crew training for B-29 aircrews. As the Air Force adjusted its production goals upward to 7,200 pilots a year, Randolph continued to provide basic training for student pilots. It was not until July 1951, as the Air Force phased in nine new contract schools, that Randolph was able to concentrate its attention on B-29 training. By the time B-29 training ended at Randolph in 1956, the base had trained over 21,500 crew members.





For a short period of time in the 1950s, Randolph AFB conducted training programs with the C-119 (top) and the B-57 (below).

In addition to B-29 combat crew training, Randolph hosted several other widely diverse missions in the 1950s. In fact, in 1954 B-29 training had to be curtailed midway through the year, so the base could establish a four-engine transport school, using the C-119. Student training began in July. A few months later, in October, Randolph began training pilots to fly the Air Force's latest acquisition, the B-57. While some classroom instruction took place, no students flew the B-57 in 1954.



A flight instructor at Randolph uses a simulator to explain the operation of a KC-97 aircraft to an aircrew member.

It was November before the base got its first four B-57s, and another four aircraft arrived in December. From the start, there were vexing maintenance problems that drove the B-57 in-commission rate down to seven percent. Besides maintenance difficulties, there was also a problem with finding qualified instructors. Because the plane was so new, most qualified pilots were assigned to units in Tactical Air Command that were converting to the B-57. Consequently, the training program at Randolph had to qualify T-33 pilots as B-57 instructors.

Both the C-119 and B-57 training programs were short lived. Neither was still around in June 1956 when the Air Force transferred helicopter pilot training from Edward Gary AFB, Texas, to Randolph. Nor did the helicopter training program remain very long.

In July 1958, Air Training Command moved helicopter pilot training from Randolph to Stead AFB, Nevada, where it also conducted survival training.

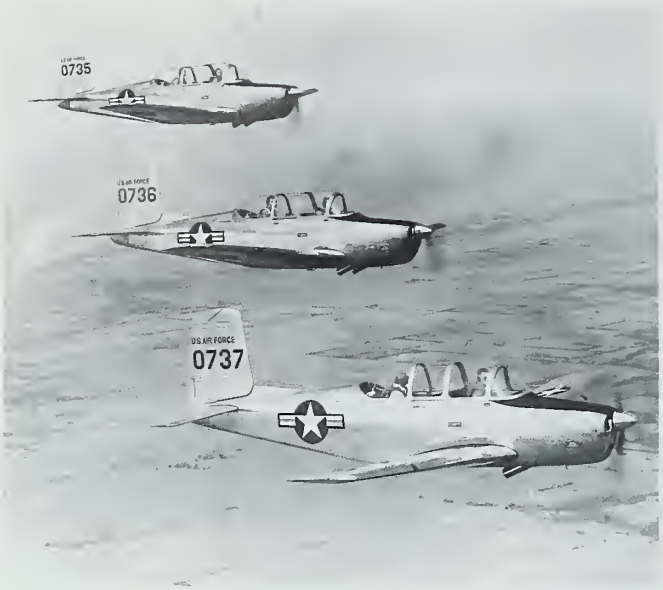
Beginning in January 1957, Randolph also conducted KC-97 combat crew training. A Strategic Air Command air refueling wing took over that training in July 1958 and remained a tenant at Randolph until June 1962.

Organizational Matters

In the meantime, a series of significant organizational actions had taken place. On July 1, 1957, Air Training Command discontinued Crew Training Air Force, which had been at Randolph since its activation on March 16, 1952, and transferred its mission, personnel, and assets to Flying Training Air Force,



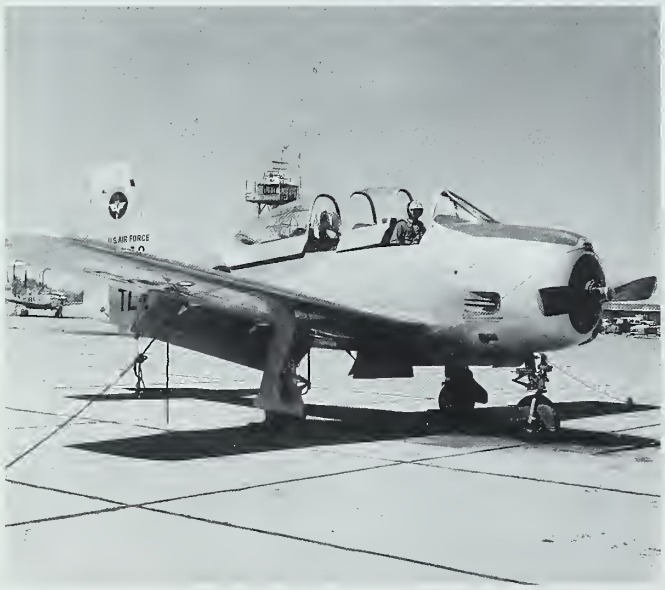
Building 900 began life at Randolph as the cadet academic facility. Today, it houses Headquarters, Air Education and Training Command.



which established an advanced echelon of its headquarters at Randolph on that same day. Between July and October, Flying Training Air Force relocated the rest of the headquarters element from Waco, Texas, to Randolph. In a parallel action, the Air Staff had decided to move Air Training Command headquarters from Scott AFB, Illinois, to Randolph. The move began with the establishment of an advanced headquarters contingent at Randolph on August 1 and was completed on September 30, 1957. No sooner had Air Training Command settled in its new surroundings when the command announced in January 1958 that it intended to consolidate the functions performed by Flying Training and Technical Training Air Forces in its new headquarters at



Air Training Command stopped using the T-34 (top) and T-28 (below) for pilot training after 1960, while the T-33 (right) remained active until 1967.



Randolph. Subsequently, Air Training Command inactivated Flying Training Air Force on April 1 and closed Technical Training Air Force operations in Gulfport, Mississippi, on June 1, 1958.

Changes in Pilot Training

At the turn of the decade, the Air Force decided to change the way it conducted pilot training. It decided to close the contract primary schools, replace all civilian flying instructors with military instructor pilots, and consolidate preflight, primary, and basic instruction at a handful of bases. One by one the contract primary schools closed and with them went Air Training Command's last T-28s and T-34s. The undergraduate pilot training program would rely on



Parked in front of base operations at Randolph AFB are the three aircraft--the T-37 (primary phase), the T-41 (flight screening), and the T-38 (basic phase)--that the 3510th Flying Training Wing used in undergraduate pilot training.

the relatively new T-37 in the primary phase and the workhorse T-33 in the basic phase. When Craig AFB, Alabama, was named as one of the bases to conduct the consolidated program, Air Training Command moved the basic pilot instructor school back to Randolph where it had resided 10 years earlier. For the time being, there was no such school for those slated to become T-37 instructor pilots; they received upgrade training at their home base.

At Randolph on St Patrick's Day in 1961, Air Training Command took possession of its first T-38, the aircraft intended to replace the T-33 in pilot training. It was the command's first trainer capable of supersonic speed. By mid-year 15 of the T-38 Talons had arrived at Randolph to take part in an extensive program to assess the new syllabus and the T-38's suitability as a basic trainer. As part of the test and evaluation, student pilots who had just finished T-37 primary training at Webb AFB, Texas, in Class 62-F moved to Randolph and went through T-38 basic training where they earned their wings on March 30, 1962, in Class 62-FZ.

Meanwhile, another brand new aircraft had appeared on Randolph's runways--the T-39A Saberliner. By September 1961, Randolph had five T-39s which the command intended to use in the instrument pilot instructor school (IPIS), recently transferred from James Connally AFB, Texas. The movement of the highly-regarded instrument pilot instructor school, sometimes referred to informally as

"The College of Instrument Knowledge," did much to solidify Randolph's status as the center of Air Force pilot instructor training.



The North American T-39 was used as a small jet transport. In 1960-1961, several early production T-39s went to Randolph for service with Air Training Command.

As early as 1963, events in Southeast Asia were beginning to make their mark on Randolph when Air Training Command transferred two courses from Moody AFB, Georgia, to Randolph. Both were Military Assistance Program courses designed to meet the needs of third world countries. The first was a T-28 course, a conventional undergraduate pilot training course tailored for Vietnamese and Latin American students. The second was a C-47 course, a transition course to teach rated pilots how to fly the C-47, aimed at basically the same countries. In the next few years, Randolph added a T-28 pilot instructor training (or PIT) course, a C-47 instrument pilot training course, a T-28 transition course, and a T-37 pilot instructor training course.

As the war in Vietnam escalated, pressure mounted for Air Training Command to produce more pilots. One way to do that was to open another undergraduate pilot training base, and that was the course Air Training Command decided to pursue--at Randolph. To make room, C-47 and T-28 courses went to Keesler AFB, Mississippi, early in 1967; T-37 pilot instructor training moved to Perrin AFB, Texas, in the summer; and T-38 pilot instructor training transferred to Tyndall AFB, Florida, late in the year. The first students entered primary training at Randolph on May 16, 1967. That brought Air Training Command's total of undergraduate pilot training bases up to nine. To further accelerate the production of pilots, Air Training Command began taking in a new class every two weeks instead of every six weeks.

By 1971 the war was winding down, and once again the landscape at Randolph began to change. In the spring of 1971, T-37 pilot instructor training returned to Randolph from Perrin, and that summer T-38 pilot instructor training transferred back to Randolph from Tyndall. Early in the fall, the last undergraduate pilot training class graduated, and Randolph once again took on the mantle of a teacher's college with the two pilot instructor training courses



In 1963 C-47 pilot training moved to Randolph. Students primarily came from South Vietnam and Latin America.

joining the instrument pilot instructor school to form the centerpiece of Randolph's mission. Another clear sign that the war was almost over was an Air Force decision to keep alive the history of some of its illustrious units. That resulted in Air Training Command replacing its four-digit flying and pilot training wings with two-digit designations. Thus, the 3510th Flying Training Wing at Randolph was inactivated on May 1, 1972, and the 12th Flying Training Wing, which was later awarded the Presidential Unit Citation for its extraordinary performance in Vietnam, was activated in its stead.

A Time of Stability

The remainder of the 1970s and the decade of the 1980s constituted a period of unprecedented stability at Randolph. Organizational actions took the limelight during this period. Most notable was the establishment of the Community College of the Air Force (CCAF) at Randolph on April 1, 1972. The idea behind the Community College of the Air Force was to provide the means to blend on-duty technical training and education experiences with courses from civilian colleges into coherent, job-related education programs. Under the CCAF program, an airman could earn a Career Education Certificate, which recognized the completion of a minimum of 64 semester hours of college-level work. The Air Force considered the certificate equivalent to an associate degree offered by a college or university.

The Community College of the Air Force gained accreditation from the Southern Association of Colleges and Schools in December 1973. It was important inasmuch as it gave the school academic credibility. In a further step, Public Law 94-361, signed in July 1976, authorized the Commander, Air Training Command to award the Associate in Applied Science degree to those who had completed a CCAF study program. On April 25, 1977, the Community College of the Air Force awarded its first college degrees to 275 airmen stationed around the world. This marked the first time enlisted personnel had received college degrees from a military organization. The college remained at Randolph until 1977 when it moved across town to the Lackland Training Annex at Medina. Subsequently, it relocated to Maxwell AFB in 1979 as part of the package which had realigned Air University under Air Training Command the previous year.

In 1972 Air Training Command also activated the Instrument Flight Center at Randolph. The Instrument Flight Center continued to run the instrument pilot instructor school, standardized the use of instrument procedures and training methods for pilots, and participated with other government and civilian organizations in developing instrument systems. However, the center's relationship with Air Training Command turned out to be an on-again, off-again affair. When the Air Force decided it no longer had a need for a dedicated instrument school, the center began phasing down operations in 1977, and Air Training Command inactivated the unit on June 30, 1978.

Just over five years later on October 1, 1983, Headquarters USAF reversed the process and reestablished the Instrument Flight Center at Randolph. This acknowledged the Air Force did indeed have a requirement for a central facility to determine and validate new flight concepts and instrument flight systems. After a 9-year association with Air Training Command and 20 years to the day after its initial assignment to Air Training Command, the Instrument Flight Center was reassigned to the Air Force Flight Standards Agency on May 1, 1992.

New Mission, New Training, New Airplanes

Passage of legislation in 1988 that set up a Commission on Base Realignment and Closure had a major impact on the mission of the 12th Flying Training Wing at Randolph. That commission selected Mather AFB, California, home of Air Force navigator training for many years, for closure by September 30, 1993. Air Training Command, after reviewing a number of options, decided it could best accommodate the navigator training mission at Randolph. To prepare for that eventuality, the command, on December 15, 1992, activated the first of three squadrons that would conduct navigator training at Randolph; the other two were activated on May 14, 1993.

The first navigator hopefuls began training in the core course on April 20, 1993, in T-43 aircraft. Under the specialized concept, all student navigators took the core course and then advanced to either the systems officer, electronic warfare officer, or navigator track. The systems officer track led to assignments in such aircraft as the F-111, F-15E, and the B-1; the

navigator track led to assignments in the C-130, KC-135, and B-52; and the electronic warfare track led to assignments in the EF-111, B-1, F-15, RC-135, and certain C-130 aircraft. In August 1993 the first students moved from the core course into the navigator and systems officer tracks; the electronic warfare officer track would not have any students until a new simulator for electronic combat training was installed at Randolph in the summer of 1995.

In May 1993 specialized undergraduate pilot training came to Randolph when Air Training Command activated a squadron to provide pilot instructor training for a new aircraft, the T-1A Jayhawk. Specialized undergraduate pilot training had been introduced at Reese AFB, Texas, in July 1992 and was a dual-track system designed to better prepare student pilots to fly either fighter-bomber or airlift-tanker aircraft. The plan called for the acquisition of three aircraft as the Air Force implemented specialized undergraduate pilot training. The T-1A was the first of these. With a jump seat located between and just behind the aircraft commander and co-pilot positions, the T-1A had a unique cockpit configuration that allowed students to train in a flight-deck environment like they might find in airlift and tanker aircraft. Next up would be a primary trainer to replace the aging T-37. To be purchased in conjunction with the Navy, it was known as the joint primary aircraft



In 1973 Air Training Command replaced its T-29 navigator trainer with the T-43A, a military version of the Boeing 737.



The T-1A Jayhawk came to Randolph in 1993. Since then, the 12th Flying Training Wing has been training T-1A instructors for the command's various flying training programs.



The T-6A Texan II, the JPATS aircraft, will replace the T-37 and serve as the primary trainer for both the Navy and the Air Force.

training system or JPATS. The third aircraft, to be obtained after the turn of the century, would be a replacement for the venerable T-38 in the bomber-fighter track. While the initial cadre of T-1A instructor pilots at Reese had been trained at the manufacturer's site in Wichita, Kansas, those slated to become T-1A instructors at Laughlin, Vance, and Columbus would go through a standard pilot instructor training course at Randolph as specialized undergraduate pilot training was phased in later in the decade.

Late in 1993, the wing at Randolph gained yet another mission. For years Air Combat Command had run a course at Holloman AFB, New Mexico, using AT-38s to prepare young pilots to make the step up to operational fighter aircraft. When Headquarters USAF decided that Air Education and Training Command (on 1 July 1993, Air Training Command changed its name) should provide that training, Holloman's AT-38s went to three different bases: Randolph and Sheppard AFBs in Texas, and Columbus AFB, Mississippi. The 12th Flying Training Wing received its allocation of ten AT-38s in October and began the first Introduction to Fighter Fundamentals course at Randolph on November 5, 1993.

The 12th Flying Training Wing acquired a new aircraft for an old mission in February 1994. The



In 1994 the 12th Flying Training Wing gained a new aircraft, the T-3A, for its flight screening program. The T-3A replaced the T-41.

mission was flight screening, and the aircraft was the T-3A enhanced flight screener. Several years earlier, in July 1991, Air Training Command had transferred responsibility for the flight screening program from the Officer Training School at Lackland AFB, Texas, to the wing at Randolph. As the Air Force implemented specialized undergraduate pilot training and introduced new, more capable aircraft, it needed a more advanced plane than the T-41--in use since 1965 and unable to fly overhead patterns and aerobatics--and the T-3A was the answer. Flight screening took place at Hondo Municipal Airport, Texas, and at the Air Force Academy, Colorado Springs, Colorado, with the flight screening squadrons at each location assigned to the 12th Flying Training Wing at Randolph.

Joint Training

Instructor navigators who moved to San Antonio had hardly had time to settle when word came down that most navigator training would be moving to Naval Air Station Pensacola, Florida. This major shift in direction was prompted by a 15 April 1993 memorandum from Defense Secretary Les Aspin that directed the Air Force and Navy to put together a joint pilot training program as soon as they could. Once Air Force and Navy officials began studying the best way to make that happen it was a logical progression to look at the feasibility of joint navigator training. Since the two services had a long history of close cooperation in that arena with the Air Force offering several courses at Randolph for Navy and Marine student navigators, it was no surprise that they quickly agreed on a common course of action. A joint working group recommended keeping Air Force core and Navy primary navigation training separate because of fundamental philosophical differences between the services; consolidating systems officer training with the Navy's tactical navigation program at NAS Pensacola; creating a T-37 top-off program at Randolph to increase flight awareness for Air Force students heading for Pensacola; and consolidating electronic warfare officer training at Randolph.

It was, therefore, somewhat of a surprise when the Air Force later (in May 1994) changed its position and proposed combining core and primary navigation training at Pensacola and conducting joint electronic warfare officer training at Corry Station, a Navy installation just outside Pensacola. When all was said and done, only interservice undergraduate navigator training, the Marine aerial navigation school, and a joint track for students going to heavy "panel navigator" assignments remained at Randolph. The latter course was geared for Navy students going to P-3 Orion antisubmarine warfare and E-6A airborne communications aircraft and for Air Force students who would wind up with assignments to B-52, E-3, and variations of C-135 and C-130 aircraft.

Joint training got underway in October 1994 with the establishment at Randolph of a joint training squadron for land-based naval flight officers and Air Force "panel" navigators. At the same time, the two services began the consolidation at NAS Pensacola of training for Air Force systems officers and naval flight officers assigned to strike aircraft. The transfer of the systems officer track was done in stages. Although the last USAF officers graduated from Randolph in March 1995, the training was available for international officers until the spring of 1996. In a similar fashion, the transition from core training at Randolph to primary navigator training at Pensacola was accomplished in increments. The first Air Force students began training at NAS Pensacola in October 1995 while the last core class of Air Force students started at Randolph the following month. When that class graduated in April 1996 the transition was complete. Meanwhile, in September 1995 joint electronic warfare training began at Corry Station, the first time since Mather had closed that Air Force navigator students had access to electronic warfare training.

The impact of joint training on Randolph's pilot instructor training mission was more limited. Not long after the defense secretary's edict that the services would conduct joint fixed wing pilot training, the first students from other services appeared on Randolph's doorstep. On October 19, 1993, four Navy, one Marine, and one Coast Guard pilot entered T-37 pilot instructor training at Randolph. These were experienced instructor pilots who were on their way to Reese to become part of the first joint primary training squadron there. A pronounced difference in training philosophies surfaced when all six struggled to keep up with their Air Force counterparts. Even though they were experienced instructors, their experience was limited to a narrow field. Whereas an Air Force instructor pilot taught all blocks of instruction in a phase, i.e., contact, formation, instruments, and

advanced, Navy instructors did not. Typically, they specialized in just one of those areas, and their knowledge and skills in the others were limited. The remedy was a pre-pilot instructor training course at Reese tailored to meet the needs of the interservice instructor pilots, a course to bring them up to speed on all facets of T-37 training and put them on a level playing field with their Air Force counterparts in T-37 pilot instructor training at Randolph.

A decision made on June 22, 1995, would substantially expand Randolph's role in the joint training arena in the years to follow. On that date Secretary of the Air Force Sheila Widnall announced the selection of the Beechcraft MK II as the Joint Primary Aircraft Training System aircraft. Over a 20-year period, the Air Force and Navy planned to buy over 700 of the turbo-prop trainers, a derivative of the Swiss Pilatus PC-9 aircraft. Like the T-1A, the JPATS aircraft was a major component of the Air Force's conversion to specialized undergraduate pilot training, and it would be the bellwether of joint fixed wing pilot training with the Navy. Its official designation was the T-6A, nicknamed the Texan II. The first T-6A arrived at Randolph on 23 May 2000.

Meanwhile, AETC was having a difficult time keeping the T-3A enhanced flight screener in the air. AETC grounded the aircraft for the first time in July 1994, after it was in service for only six months, and for the last time in July 1997. During that period, the T-3A experienced 66 uncommanded engine stoppages and three Class A mishaps at the Air Force Academy that resulted in six fatalities. When the command continued to experience difficulties after two years of modifications and testing, the Air Force decided in October 1999 to ground the T-3A permanently. In place of the enhanced flight screening program, AETC developed the Introductory Flight Training program. This new program relied on independent flying schools all over the country to provide prospective Air Force pilots with 50 hours of flight instruction and a private pilot's license before they entered pilot training.

In 1997, scarcely two years after the Air Force moved most of undergraduate navigator training from Randolph to NAS Pensacola and Corry Station, the 12th Flying Training Wing was making preparations to bring it back. Some of the operational commands had expressed concerns about training delays and shortfalls after the move to Florida--concerns that AETC shared. As a result, the Air Force decided to transfer its core navigator training and electronic warfare officer (EWO) training courses to Randolph. Core training resumed at Randolph in April 1999, and EWO training began in August 1999.

From an organizational standpoint, April 1998 was an especially significant month. By then the 12th Flying Training Wing's IFF mission had grown to the point that AETC activated a new squadron--the 435th Flying Training Squadron--to house that mission and the 28 AT-38s assigned. The Air Force Reserve Command activated the 340th Flying Training Group at Randolph to serve as the administrative headquarters for AFRC flying training squadrons located at Laughlin, Columbus, Vance, and Sheppard. These units supported an important initiative that enabled reservists to supplement AETC's active duty instructor pilot force. Over a year later, on 24 September 1999, Randolph also gained a reserve squadron when AFRC activated the 100th Flying Training Squadron--one of the original Tuskegee airmen squadrons--at the base.

At the dawn of a new millennium, Randolph could look back on seven decades as the Air Force's preeminent center for flying training. Whether it was the flying cadet program, the central instructors school, combat crew training, undergraduate pilot training, pilot instructor training, specialized undergraduate navigator training, or joint training, the common denominator was always training--the heart and soul of Randolph's mission.



Lackland



Gateway to the Air Force

Origins

Lackland Air Force Base dates from June 26, 1942, when the War Department separated the part of Kelly Field lying west of Leon Creek and made it an independent installation, naming it the San Antonio Aviation Cadet Center. From its acronym (SAACC), many people called the base sack, sack-c, or, less



The base was named for Brigadier General Frank D. Lackland, who had originated the idea of establishing an aviation cadet reception and training center.

affectionately, sad sack. Even with its own name, townspeople and most military leaders continued to think of it as a part of Kelly Field. The base bore three awkward and innocuous designations in the first two years after World War II, adding to the confusion. The War Department finally resolved the identity crisis on July 11, 1947, by naming the base for Brigadier General Frank D. Lackland. It was Lackland who originated the idea of an aviation cadet reception and training center for Kelly.

Prior to 1941 the portion of Kelly Field beyond Leon Creek known as "the Hill" had served at various times as a bivouac area and bombing range for advanced aviation cadets. Construction on the Hill began on June 15, 1941. Contractors could not keep up with the quickening pace of world events as they cleared mesquite and prickly pear; laid out water lines, sewers, and streets; and erected frame buildings with asbestos siding for an Air Corps replacement training center. The first class of 1,906 cadets began training in mid-November 1941, even though barracks were not ready until mid-December. Until then, cadets marched a mile up and back each day from a tent city on the northwest edge of Kelly's runway.

The demand for aircrews became urgent in America's mobilization after Pearl Harbor. Inductees picked as aviation cadets (future pilots, navigators, and bombardiers) began to pour into Kelly Field. Army Air Forces officials decided to separate pre-flight training, indoctrinating future pilots on the Hill and future navigators and bombardiers at Ellington Field, near Houston, Texas. With this decision, Kelly officials set up an informal reception and classification function to take on these added duties. It now received all aviation inductees from the Army Air Forces' gulf coast training region (much of the American south and southwest) and classified each for pilot, navigator, or bombardier training.

On April 30, 1942, the War Department redesignated the replacement training center as a preflight schoo and established a classification center. However, the center was not activated until June 10. This expansion in classification operations caused a need for additional facilities. As a result, in June contractors began building on the Hill west of Military Road.

Managing this explosion of activity on the Hill became increasingly burdensome for the commander of Kelly's advanced flying school, whose focus was on the urgent demand for bomber pilots. Between April and June 1942, the United States Army Adjutant General sorted out a separation of the two installations, involving a series of command dircctives, general orders, and construction projects that relieved the

advanced flying school and Kelly Field of both aviation cadet classification and preflight training.

The Adjutant General took action on June 26, 1942, when he directed that the Hill be separated from Kelly Field and that it be operated as an independent military installation designated as the San Antonio Aviation Cadet Center. By then, the preflight school and the station hospital had moved into just completed facilities on the Hill east of Military Road. The classification center could not begin its move until new facilities west of the road were ready for occupancy in September.

The Gulf Coast Army Air Forces Training Center, an intermediate higher headquarters, formally transferred the preflight school, the classification center, a station hospital, an Air Force band, and several other units to the San Antonio Aviation Cadet Center on July 4, 1942. On the same day, Colonel Michael F. Davis set up and took command of the aviation cadet center headquarters. The classification and preflight establishments remained assigned to the Gulf Coast Army Air Forces Training Center, headquartered at Randolph Field, while their commanders reported to Colonel Davis.

The physical plant of the San Antonio Aviation Cadet Center did not take final shape until the summer of 1943, when construction of facilities finally caught up with the need. By then, the station hospital had joined the classification center and preflight school as a major mission organization. It had taken on significant medical training courses, in addition to its primary function of servicing the installation.

Mission

With general mobilization following Pearl Harbor, the San Antonio Aviation Cadet Center grew rapidly. Cadets of Class 42-F had begun training in November 1941 for a nation at peace; they graduated in late December facing warfare. Instructors for that first class had to devise the four-week curriculum as they taught it. The course taught military indoctrination (36 hours), administrative indoctrination (23), academics (42), and physical conditioning (32). The course gradually lengthened to 10 weeks as the war progressed. The urgency for pilots decreased, and the lessons learned from combat found their way into the curriculum. Approximately 90,000 candidates for flying training passed through the preflight school before the need diminished, and the War Department ordered the school closed on April 30, 1944.

The San Antonio Aviation Cadet Center performed a variety of other training missions late in the war; among them were officer candidate training for enlisted men, indoctrination for officers directly commissioned, and preparation for officers to pursue advanced college courses. Within days after announcing, on March 23, 1944, plans to disband the preflight school, the War Department reversed itself and added to the school's mission: preparing Turkish Air Force lieutenants for undergraduate pilot training. The school finally discontinued on June 30, 1945.

With the end of preflight training, the San Antonio Aviation Cadet Center's name was no longer appropriate. On July 1, 1945, the installation was redesignated as the San Antonio District, Army Air Forces Personnel Distribution Command, signaling a new mission: receiving veterans from the combat theaters and either reassigning or separating them. The base's 1,500-bed regional hospital played a large role, tending to the rehabilitation and physical evaluation needs of those arriving from wartime assignments. With that task largely accomplished in early 1946, the base became subject to the general demobilization.

Instead of closing operations on the Hill, as happened to most wartime training camps, the War Department redesignated it as the Army Air Forces Military Training Center, on February 1, 1946, and gave it the basic military training mission that had been at Harlingen Field, Texas. As other boot camps closed, the Army Air Forces intended to consolidate all enlisted basic training on the Hill. Reinforcing the military training center's indoctrination mission, the Officer Candidate School also transferred here from Maxwell Field, Alabama.

On November 1, 1946, Air Training Command redesignated the military training center as the Indoctrination Division. Then on August 26, 1948, Air Training Command added the newly organized 3700th Basic Training Wing to the Indoctrination Division. However, Air Training Command discontinued the wing less than a year later on April 22, 1949. A new wing, the 3700th Air Force Indoctrination Wing, organized on October 28, 1949. At the

same time, Air Training Command disestablished the Indoctrination Division. The wing was now the host unit on Lackland. In January 1953, Air Training Command redesignated the 3700th as a military training wing, and six years later, on January 1, 1959, the wing again changed its name, becoming the Lackland Military Training Center.

"The Gateway to the Air Force" accurately described Lackland after 1946. Much of the time, it had sole responsibility for the military indoctrination of basic trainees. Only when manpower requirements increased during the Berlin Airlift crisis and during the Korean and Vietnam Wars did the Air Force find it necessary to conduct basic military training elsewhere. Sheppard Air Force Base, Texas, provided recruit training from August 26, 1948, until April 1, 1949. Sheppard, Parks Air Force Base in California, and Sampson Air Force Base in New York trained recruits during the Korean War. Crowded conditions and a meningitis outbreak caused Lackland to shift some basic trainees to Amarillo Air Force Base, Texas, between February 17, 1966, and December 11, 1968. With those exceptions, after February 1946 all enlisted airmen began their Air Force careers at Lackland.

Over the same period, Lackland had a large role in training future officers. Officer Candidate School produced reserve officers from the enlisted corps until July 1962; the Officer Training School (OTS) activated on July 1, 1959, to commission college graduates with no prior service, as well as airmen who had earned undergraduate degrees. Throughout most of its history, Lackland provided military orientation for officers directly commissioned on enlistment, especially clergy and lawyers recruited for the chaplaincy and the judge advocate corps. Only Air Force Academy cadets, Air Force Reserve Officer Training Corps cadets, and a very small number of direct commissionees won gold bars without a stint at Lackland. However, that changed in 1993 when the command moved the Officer Training School, as well as chaplain and legal training, to Maxwell AFB, Alabama.

The Korean and Vietnam Wars severely tested Lackland's capacity to train the airmen being recruited. When Air Force officials lifted recruitment ceilings on December 21, 1950, Lackland saw a dramatic rise in the number of enlistees arriving daily. That number peaked at 6,007 recruits on January 12, 1951, before the Air Staff suspended enlistments. By then, the trainee population topped 55,000 on a base with a maximum capacity for 25,000 trainees. Lackland officials suspended all training, while instructors and support personnel worked overtime just to provide for the essential needs of the recruits. Lackland had become a tent city, with row upon row of squad tents, mess tents, and latrines on virtually every open space, including the main parade ground.

The training surge for the Vietnam War was less chaotic but still challenging. Between mid-1965 and



Officer Training School graduates celebrate their commissioning as second lieutenants in the United States Air Force.





In late 1950 and early 1951, thousands of young recruits poured into Lackland on a daily basis (right). The only way the base could house them was by setting up a tent city (above).

mid-1966, the military training center regularly handled recruit populations of 20,000 and more, while manned and equipped for 17,770 basic trainees. Even though the center split training shifts, reduced the course length from 30 to 24 days, and increased flight size, some recruits still had to live in tents.

Lackland's technical training mission grew out of the Korean War. During the war, the 3700th Instructor Squadron had periodically taught a one-week training course for recruiters. This unit not only trained instructors and recruiters but also taught several technical subjects, including career counseling and band.

Lackland gained its first permanent technical training responsibility in May 1954, when the Officer Candidate School implemented the USAF Recruiting Course. The base received its first technical training unit on November 20, 1956, when the 3275th

Basic Training













Technical Training Group transferred from Parks AFB, California, bringing with it all air police training. Then in July 1957, the 3275th acquired cryptographic equipment maintenance training from Scott AFB, Illinois. In 1958 the Air Staff gave the 3275th two new missions connected with air police training: the USAF Marksmanship Center and a sentry dog handler course. Training began late in the year.

With the closure of Chanute AFB, Illinois, in 1993 and Lowry AFB, Colorado, in 1994, Lackland gained a number of training programs, including vehicle operator and maintenance, electronic principles, contracting, logistics plans, services, and supply.

Teaching English to military personnel from foreign countries is Lackland's other principal mission. Such instruction began informally in 1953. As the United States increased military aircraft sales to friendly governments, more of the contracts included pilot and maintenance training clauses. The 3746th Pre-Flight Training Squadron (Language) activated in May 1954 to establish a formal English training program. The squadron gave way to the USAF Language School, activated on January 1, 1960. The Department of Defense took over the mission in July 1966 and gave it to the Defense Language Institute, under the executive agency of the US Army. Finally, in October 1976, the Air Force became the executive agent for the Defense Language Institute English Language Center.



Two students from Germany use a tape recorder to learn English. Allied students, already schooled in English, are given instruction in colloquial and technical aviation language prior to entering flying training.

Physical Features

Until the beginning of the 1990s, the base retained the appearance of a World War II temporary training camp. Facilities erected initially (1941) and in two great mobilizations (1942-1943 and 1951) continued to dominate the Lackland landscape. The World War II buildings were typical of mobilization construction: set on exposed concrete piers, exterior plank walls covered by tar paper, studs exposed on the interior, single plank interior divisions attached to studs, low-pitched composition roofs. The Air Force had long since either closed or rebuilt most of the bases opened during the 1941-1943 mobilization. Lackland was a principal exception.

When the War Department decided to give the base a postwar mission to indoctrinate basic trainees, not a single permanent structure stood on the installation. Most of the approximately 1,400 buildings erected for World War II were in place when the Korean War began in June 1950, many having been upgraded during the late 1940s. Korean War manpower needs greatly exceeded the physical plant's capacity, even with other bases joining the basic military training effort. The result was another mobilization building project, including 129 I-type dormitories to increase the base's trainee/student capacity. While these two-story, flat-roofed frame buildings included several amenities absent from the 1942-1943 barracks, in essence they were simply the next generation of temporary housing for troops.

The first dismantling of World War II structures came in 1952-1953, when most of the barracks hastily thrown up in the second wave of wartime construction (1943) were removed. These single-story, tar-papered barracks with detached latrine/shower buildings were more durable than quonset huts but less substantial than the two-story barracks. The last of the 129 barracks were dismantled after the cryptographic equipment maintenance school moved out in 1961.

In 1957 Lackland got its first visible sign of permanence. A new nine-story, 500-bed hospital dominated the north rim of the base, displacing most of the 94 temporary buildings that had made up the hospital complex. The hospital added a 500-bed wing in 1961.

It was between 1966 and 1971 that perceptible change began. First, contractors razed or moved 109 World War II barracks from the east (or permanent party) side of Lackland. A main base exchange complex took their place in 1971. At the same time, on the west (or training) side of Lackland, contractors built more facilities for recruit housing and training.

Lackland commanders, starting with Major General Andrew P. Iosue in 1976, began removing the old, temporary structures as rapidly as possible. With less training and housing footage on the books for Lackland, Air Training Command could better justify requests for new classrooms and dormitories. New construction in the 1980s was almost exclusively for unaccompanied permanent personnel quarters and technical trainee dormitories. The former opened for occupancy in 1981; the latter came in four projects completed in 1983, 1986, 1987, and 1989. With the completion of a visiting airmen quarters in 1990, along with yet another round of World War II barracks demolition, Lackland stood poised at the threshold of permanence.

To accomplish this final phase, base leaders launched "Fix Lackland" in the mid-1980s. The first phase tackled crumbling infrastructure: sewers, sewage treatment, water mains, and roads. Lackland already had pledges of command and Air Staff support for major construction in the early 1990s when the deepening federal fiscal crisis and the Desert Shield/Storm contingency put most projects on indefinite hold. Since the war, Lackland has made giant strides in its rebuilding project.

In June 1997 the Air Force activated the Force Protection Battlelab at Lackland. Dedicated to keeping the US Air Force one step ahead of the terrorist threat, the lab opened in response to the 1996 bombing at Khobar Towers, Saudi Arabia, when 19 airmen died in a terrorist attack. Later in the year, a new Security Forces Center opened to house Security Forces headquarters, which moved to Lackland from Kirtland AFB, New Mexico.

As a result of numerous sexual harassment incidents in the military services in the 1990s, Congress established the Kassebaum-Baker Committee in 1997 to study whether military training, especially that of newly enlisted personnel, should be integrated by gender or not. At the same time, the Department of Defense set up its own advisory committee. In congressional testimony, the AETC commander firmly advocated maintaining gender-integrated basic training at Lackland, which the Air Force had been conducting since 1990 so that the service could continue to train as it operated. The Air Force instituted several actions to insure better recruit safety and privacy following the Kassebaum-Baker report but retained its gender-integrated recruit training.

In October 1999 the 37th Training Wing made a major change to its basic military training curriculum with the implementation of Warrior Week. While not changing the six-week length of basic military training, this week-long encampment exposed trainees to living conditions they might expect to find during a real world deployment and included a realistic combat exercise.

As a result of the July 2001 closure of the San Antonio Air Logistics Center, Lackland would assume control of the Kelly airfield. The resulting merger would make Lackland one of the most heavily populated bases in the Air Force.

Conclusion

Over the years, the face of military aviation in San Antonio has changed, almost imperceptibly in some instances, quite dramatically in others. Lackland Air Force Base, carved out of Kelly Field and originally known as the San Antonio Aviation Cadet Center, has made its mark without even having a runway. It did that as the home for preflight training, Officer Candidate School, Officer Training School, English language training for foreign students, a variety of technical training, and, above all else, basic military training. Today, it remains the place where virtually every enlisted person who enters the Air Force undergoes basic training.

On the northeast fringe of San Antonio, Randolph Field is still training people how to fly--with some notable variations. Instructor pilots begin with prospective pilots and test their mettle in a challenging flight screening program. They also teach others how to be instructors in the fighter-bomber and airlift-tanker tracks of specialized undergraduate pilot training. Other instructors help new pilots make the step up to fighter aircraft, and instructor navigators prepare both Air Force and Navy students for navigation duties on selected aircraft.

Across town, Brooks Field got out of the pilot training business at the end of World War II, only to resume that training during the Korean War, this time for reservists. In 1959 Brooks Air Force Base became the home of the USAF Aerospace Medical Center, and since then it has grown into a major medical research facility, the Armstrong Laboratory, one of the Air Force's four super laboratories.

At nearby Fort Sam Houston, the airplane disappeared from the old Remount Depot early on--when Kelly Field opened in 1917. As for Kelly Field, it set aside its flying training activities early in 1943 and became a huge industrial complex that overhauled, repaired, and modified aircraft engines and related equipment. Today, Kelly Air Force Base hosts the San Antonio Air Logistics Center, but the center closes and the base realigns in July 2001. Its storied history, however, will live on.

Gazetteer

Alamo Field (today known as San Antonio International Airport). Used as an auxiliary field of Dyess Army Air Field and Brooks Field from 1942 until 1945.

Cade Field. Located 8 miles northeast of San Antonio. Leased to Randolph Field from 1932-1949 as an auxiliary field.

C. A. Krueger Field. Located on farm land 7.5 miles east of Randolph Field. Leased by Randolph from 1932-1945 as an auxiliary field.

Camp Bullis. Located north of San Antonio off Interstate 10. First established as a cantonment area in 1918. Its 28,000 acres remain in use as a maneuver area and firing range.

Camp John Wise. Located near Fort Sam Houston. Built as an Army balloon school in 1917, it was used in conjunction with the balloon school at Brooks Field until 1922.

Camp Normoyle. Located 1 mile east of Kelly AFB. Established in 1918 as a Quartermaster Depot and continued that function until 1945, at which time it was redesignated as East Kelly.

Camp Stanley. Located north of San Antonio off Interstate 10. Part of a land purchase started in 1906, Camp Stanley was first established as an Officer Training Camp in 1917.

Castroville Field. Located 2 miles east of Castroville, and 20 miles east of Hondo. Acquired in early 1939 and used off and on until 1991 as an auxiliary field of Kelly Field, Hondo Army Air Field, San Marcos Army Air Field (later renamed Edward Gary AFB), and Randolph AFB.

Clear Springs Field. Located 4 miles east of New Braunfels. Leased from 1940-1967 as an auxiliary field of Randolph and Edward Gary AFBs.

Davenport Field. Located on farm land 5.5 miles northwest of Randolph Field. Leased from 1932-1952 as an auxiliary field of Randolph.

Diltz Field (also known as Flores Field). Located 18 1/2 miles southeast of Brooks Field and 3.8 miles northwest of Floresville. Leased as an auxiliary field of Brooks and Randolph Fields from 1943-1946.

Dodd Field. Located 2 miles north of Fort Sam Houston in the general vicinity of Harry Wurzbach Road between Winans and Rittman Roads. First known as Fort Sam Houston Remount Station #1, it became known as Dodd Field in 1915. Used as a flying field into World War II when it became home to the 60th Troop Carrier Squadron. Used to hold German, Japanese, and Italian prisoners of war in World War II.

Duncan Field. Originally designated as Camp Kelly in 1917. Later that year, it was renamed Kelly Field Number 1. In 1926 it became Duncan Field, home of the Air Corps Training Center. Duncan Field merged with Kelly Field in 1943.

Hondo Municipal Airport. Located 2.1 miles northwest of Hondo. Originally activated as Hondo Army Air Field in 1942 and used for navigation training. Since 1973 used for the Air Force flight screening program.

Macdona Field (also known as Houze Field). Located 2 miles south of Highway 90. Leased from 1938-1945 as an auxiliary field of Kelly and Brooks Fields.

Martindale Field. Located in east San Antonio just south of Interstate 10. First leased in 1932 as an auxiliary field of Randolph. It was later purchased and continues in use.

Rio Medina Field. Located 5 miles north of Castroville. Leased as an auxiliary field of Kelly, Brooks, and Hondo from 1940-1945.

Seguin Field. Located 3 miles east of Seguin. Leased in 1940 as an auxiliary field of Randolph.

Stinson Field. Located in southeast San Antonio. Gained by Kelly Field in 1917 as Flying Field Number 5 and used off and on until 1973.

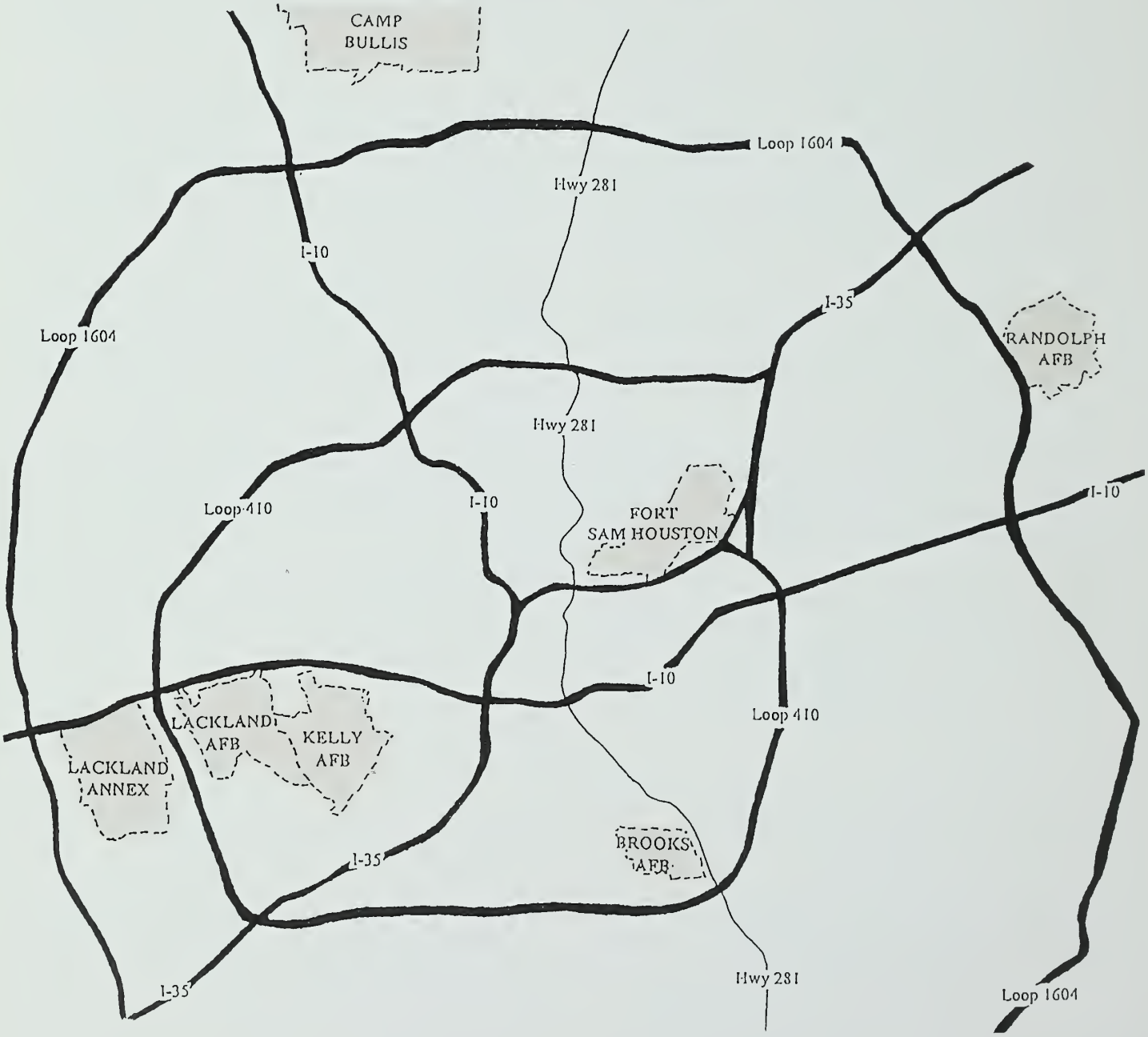
Vanderstucken Field (also known as Alamo Downs Field). Located 7 miles northwest of Kelly AFB. Leased by Kelly Field in 1917 and used by Kelly and Brooks as an auxiliary field until 1944.

Wohlfahrt Field (also known as Marion Field). Located 2.6 miles north of Marion. Leased in 1932 as an auxiliary field of Randolph and used off and on until 1958.

Yturri Field. Located 4 miles southwest of Brooks Field. Leased 1942-1946 as an auxiliary field of Brooks.

Zuehl Field. Located 13 miles southwest of Seguin. Leased from 1932-1960 as an auxiliary field of Randolph.

Current Area Map



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